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ABSTRACT

This 11-part monograph is designed to assist individuals in selecting appropriate citizen participation methods and in developing a better understanding of the decision-making process. The first section offers an historical perspective of public participation and defines its current status. The next seven sections present several techniques/methods related to public participation. Selected units from diverse sources are included to indicate types of information which are readily available as well as to present information on specific topics. Subjects include a definition of public participation, methods of transferring technical information, establishing community relations, using the media, consultation methods, group interaction techniques, and evaluation/analysis methods. Skills and knowledge required of public participation coordinators are also demonstrated. Since the quality of public participation efforts may be determined by comparing current plans with previous efforts, case studies of citizen involvement programs that have been successful (as well as those that did not meet their goals) are presented in the next section. United States Environmental Protection Agency regulations and strategies regarding public participation and a listing of documents and other resources available for public participation coordinators and others to use to increase their awareness about citizen participation are presented in the final two sections. (JN)

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PUBLIC PARTICIPATION

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A COLLECTION OF IDEAS AND MATERIALS FOR PUBLIC PARTICIPATION

PREPARED BY

BERNARD J. LUKCO
AND
RICHARD A. ELLIS

MONOGRAPH SERIES:

PUBLIC PARTICIPATION

AS PART OF

GRANT NO. T-901184-01-0

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PREFACE

The EPA Instructional Resources Center is continuing the development of an Instructional Resources Monograph Series. The monograph series is an extension of the information provided in the Instructional Resources Information System (IRIS) for water quality.

This document is one in the Instruction Resources Monograph Series. These documents are designed to assist the professional in identifying and locating instructional and reference materials related to various technical aspects of water quality control. Emphasis is given to items useful in the development and presentation of wastewater treatment training programs.

Each monograph reviews an aspect of wastewater treatment, provides representative examples of available instructional materials, and includes an annotated bibliography, often with additional references. Previously published titles in this series include:

> Clinton L. Shepard and James B. Walasek, Instructional Resources Monograph Series: Activated Sludge. EPA-430/1-80-008. September 1980.
>
> Herbert L. Coon, Instructional Resources Monograph Series: Safety in Wastewater Treatment Systems. EPA-430/1-81-014. June 1981.
>
> Robert D. Townsend, Instructional Resources Monograph Series: Anaerobic Digestion. EPA-430/1-81-017. August 1981.
>
> Herbert L. Coon, Instructional Resources Monograph Series: Improving Instruction, A Collection of Ideas and Materials for Vocational Trainers. EPA Instructional Resources Center and SMEAC Information Reference Center. December 1981.

Your comments and suggestions regarding this series are invited.

John F. Disinger
Associate Director
EPA Instructional Resources Center

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INTRODUCTION

The proposed uses of this monograph are two-fold:

(1) it should provide enough background on the basic theory, socio-political underpinnings, and the various methods of and obstacles to conducting public participation so that it can be treated as a general text on the subject. In this mode it will be of service to staff members who are responsible for formulating public participation plans, but lack familiarity with the essentials of the process;

(2) it should provide sufficiently discrete treatment of elements of the public participation process that it can be used as a reference manual by staff members with experience in public participation who wish to consider modifications or techniques new to their programs.

We hope that the organization of this manual will address these two needs, which are common among project planners.

This monograph is organized to array the information to assist readers in choosing appropriate methods and developing better understanding of the process of decision-making. No single system is recommended, since citizen participation activities are complex, nor are all alternatives presented. Judgements on the part of those organizing the activities are ultimately tested by the quality of citizen involvement; however, those judgements can be refined and more effectively implemented. Some common concepts and skills that appear to be successful are explored.

The first section of the monograph offers an historical perspective of public participation and defines its current status. The approach is one of practicality: to encourage readers to use the information. The assumption is that citizens have both the right and the responsibility to be concerned with and active in governmental decisions, without being manipulated or coerced. This perspective is reflected.

A second section presents several techniques and methods related to public participation. Selected units from diverse sources are included to indicate types of information which are readily available, as well as to present information on specific topics. Subjects include a definition of public participation, an overview of planning, some principles of information dissemination, methods of transferring technical information, establishing community relations, using the media, consultation methods, group interaction techniques, and evaluation and analysis procedures. Skills and knowledge required of public participation coordinators are demonstrated. Specific education or training of public participation coordinators can be enhanced and evaluated by using units from this section.

Another method to determine the quality of a public participation effort is to compare current plans with previous efforts. Case studies of citizen involvement programs that have been successful, as well as those that did not meet their goals, are included. They include a variety of issues, techniques, and methods. An opportunity is presented to review what others have accomplished and the procedures used. Although no two situations will be exactly alike, common concerns can be identified and expected problems avoided.

A listing of documents and other resources available for public participation coordinators and others to use to increase their awareness about citizen involvement comprises the next section. After reviewing the first several sections, the reader will better understand in what areas he or she requires additional information. A listing, based on searches of computerized and documented bibliograhies, is offered for review. Many of the documents are abstracted and include availability information. Other lists that can be located through normal library access are presented. Also included in this section is information on how to use the Educational Resources Information Clearinghouse (ERIC) and the Instructional Resources Information System (IRIS). Many of the listings of documents are from these systems.

A final section deals with current U. S. Environmantal Protection Agency regulations and strategies regarding public participation. This section offers readers the opportunity to review an approach to citizen involvement as determined by a federal agency with several legislated mandates to involve citizens in decision-making and a variety of issues that require public understanding.

The monograph will guide the reader to sources of additional information to broaden understanding of public participation. It should be used as a reference tool, to lead the public participation coordinator to additional information.

Bernard J. Lukco
Richard A. Ellis

December, 1982

Section 1:

Context of Contemporary Public Participation

CONTEXT OF CONTEMPORARY PUBLIC PARTICIPATION

The fundamental recurring theme in contemporary discussions of public participation is the assumption that the common man has both the right and ability to participate in his own governance. Presumably, if given the opportunity, the overwhelming majority of people in any society will be reasonable, relatively rational, and responsible political actors.[1] However, as social scientists have observed, most people tend to exhibit only sporadic interest in public affairs and few participate actively.

The notion that Americans have a right to participate at any level of government which they choose has been embedded in American thought since the earliest days of colonial life. The currency of this belief is expressed by both private citizens and organized advocacy groups.

The development of public participation demand is a process fairly well agreed upon in the literature. Observers of this process note that in recent years the public, or at least significant segments of it, has become increasingly disenchanted with government decision-making, and at least believe the public has been disenfranchised from the process.[2]

Another underlying pressure for greater power sharing has been the failure of governmental plans or policies to identify correctly the desires of the public.

Mounting frustration with the performance of governmental agencies considering the will of the public has taken a variety of forms. Of these, the most significant political development has been growth in the membership of pressure groups seeking to influence planning and policy-making.[3]

Traditional means of seeking influence, such as informal contact with planners and politicians, preparing briefs for hearings, and letter writing, are being augmented by new procedures seeking direct access to agency decision-making processes, oftentimes ending in resort to the courts.

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[1] Cobb, Roger W. and Elder, Charles D. Participation in American Politics: The Dynamics of Agenda-Building. Baltimore and London. The Johns Hopkins University Press, 1972.

[2] Ibid.

[3] Sewell, W. R. Derrick and O'Riordan, Timothy. "The Culture and Participation in Environmental Decisionmaking." Natural Resources Journal. Vol 16, No. 1, 1976, pp. 1-21.

The overall effect of these developments should be to make clear not only that the public wants to be heard, but also that its influence cannot be ignored. The agency not only has an interest in avoiding losing court suits, but has other "stakes" in involving the public.

One of these "stakes" is basic to the question of what role the public plays in agency decision-making relative to project planning and implementation. It has been observed that technical people thrive on solving technical problems, but many times do not adequately consider the nontechnical aspects of those problems. They may actively resist recognizing some of the problems as value judgements and may be inadequately prepared to handle them even when it is apparent they are value judgements.

Technical people, however, must acquire a concern about value judgements because they have been making them on engineering projects without recognizing that they have been doing so.[4]

The technologist may find assistance in approaching problems involving value judgements by drawing on an interested public. The nugget of this observation involves the anticipation of conflict.

An active public participation program assists not only in identifying problems that a policy or project planner might overlook as an area of confrontation, but also suggests approaches for solving these problems. The public participation program must seek to assure that both the planners and the public have the same understanding of what the problems are. The proposed solutions must be perceived as solutions by both the planners and the public. Public participation has been called an educational process, but education is a two-way street. It is here that the discipline-oriented person learns about value judgement problems.[5] It is simpler, however, to tell why public participation is necessary in bureaucratic planning than to tell how to accomplish it effectively.

There may indeed be drawbacks for an organization, attempting to serve broad publics efficiently, to permit penetration of its decision-making processes. One observer states that efficiency and participation are not necessary consequences of increased participation. The fundamental questions of adjusting individual benefits to community welfare and the "common good" must be answered. Nor does participation assure that decisions will be more "rational";

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[4] Silberman, Edward. "Public Participation in Water Resource Development." American Society of Chemical Engineers, Journal of the Water Resource Planning and Management Division. Vol. 103, No. 1, 1977, pp. 111-123.

[5] Ibid.

that when presented with information citizens will make "optimal" choices; or that broadly based political interaction inevitably leads to wiser policies.[6]

A "bottom line" inducement for agencies to undertake effective public participation programs may lie, however, in the record of a long line of plans which were never implemented and projects which were stopped cold in the courts because they could not be supported or because powerful elements of the society found them politically unacceptable.

Another factor which encourages agencies to avoid expensive, damaging, and delaying interdiction of agency activities by opposing publics is the effect of law. The Administrative Procedures Act of 1946 (60 Stat. 237 and Amendments, U.S.C. Title 5) is an example of Federal legislation specifying procedural requirements, limited as they may be, for public involvement in agency decision-making. Another law which has taken the public's right of involvement in agency decision-making even further is the National Environmental Policy Act (42 U.S.C. Sections 4381, 4331, 4347). No longer may the agency set the bounds from which it may delimit environmental concerns which may contradict decisions reached within the strict confines the agency's technical expertise. Not only must it consider environmental impacts, but it must show that it has considered impacts alleged by the public. A plethora of specific Federal laws has strengthened even further this public right to expand the parties to decision.

Those who have examined the context of public participation have drawn a scenario where the expert agency comes to the participatory table with technical expertise in solving generic problems but with no inherent right to declare that a problem exists, to define the problem, or to delineate the costs and benefits of taking action. Additionally, the agency is coerced to the table by prospects of reduced prestige, unfavorable legislative and executive branch attention, issue expansion, aroused opposition, extra-legal intervention (riots, sit-ins), and possible loss of domain. In addition to these formidable threats there is a prod of law which can lead ultimately to impasse, delay, and total defeat of agency plans with resultant loss of the political and financial investment in planning.

To the other side of the participatory table, in this scenario, come the publics. They bring with them an American predisposition to have a say in decisions affecting them. They may come under the prospect of being directly affected by a proposed agency action, either favorably or adversely, and they may come with value systems quite different from those maintained by the specialist bureaucrats.

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[6] Wengert, Norman. "Where Can We Go with Public Participation in the Planning Process?" Social and Economic Aspects of Water Resources Development. Proceedings of the Symposium on Social and Economic Aspects of Water Resources Development, 1981, pp. 9-18.

In this scenario, with its inherently conflictual tendencies, it becomes essential that conflict be managed such that compromise and satisfaction may result, or at least such that the predicament described by one writer does not result:

> Both sides are firmly locked into their positions, without any alternative save complete capitulation (of) the other side. The winner of the encounter becomes arrogant and promises more of the same the next time around. The loser bitterly promises revenge.[7]

To avoid this impasse, the public participation program must be planned carefully. Although each situation dictates its own specific approach, much is to be gained from examining the advice of those who have "been there," and accounts of other public participation efforts.

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[7] Cook, Harry N. "Nourishing Public Participation." Water Spectrum. Vol. 3, No. 3, 1971, pp. 7-11

Section 2:

Defining Public Participation

DEFINING PUBLIC PARTICIPATION

The concept of public participation can be interpreted in many ways. There are wide-ranging views on what public participation really is and what it ought to be. Views vary from token involvement to complete accommodation of every interest group. Some persons feel that government should be responsible for informing but not educating the public, while others feel that education is a significant part of the process.

A set of exercises was developed by the Bureau of Land Management (BLM)*, U. S. Department of the Interior, as part of a training course for government officials who work on public participation in environmental assessment. The exercises are intended to illustrate some techniques for effective participation and communication. An acceptable definition can enhance the education and training process and is a good place to begin. The following unit, developed by BLM, demonstrates a group process technique that immediately involves all those participating in the workshop and leads to the development of a definition acceptable to the group involved.

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*Learning Resource #1: Training Handbook for Environmental Analysis. U. S. Department of the Interior, Bureau of Land Management, Division of Environmental and Planning Coordination. Washington, D.C. 1974.

Exercise: Defining Public Participation

Instructions

In this exercise you will be working in small groups. Each group should delegate one of its members as a spokesman/recorder. Your task is to define "meaningful public participation"; that is, public participation as you think it ought to be. To focus your ideas, you should find it helpful to consider: "What are the goals for involving the public in Federal decision-making?"

DO NOT READ THE NEXT SECTION UNTIL YOU
HAVE COMPLETED THIS EXERCISE.

Step 1. As individuals, work silently to define public participation.

Brainstorm. Do not hold ideas back that are out of the ordinary. Reserve judgement. Don't take time to evaluate your ideas as they flow. Everything goes! Use the space provided to record your ideas. These should, as much as possible, be expressed in short words or phrases - not paragraphs.

Step 2. Present the items which you have included in your definition for listing on the flip chart. The recorder should write each item as stated by the participant and give each item a number. Do not worry about form or overlap. At this time, avoid discussion of the items, simply list them on the flip chart.

Step 3. Discuss the items on the flip chart for clarification.

Step 4. a) Working individually, list those items on the flip chart which you feel are most important.

b) Rank these in order of importance.

c) Tabulate the rankings on the flip chart.

Step 5. Discuss the rankings. Does everyone understand what is meant by each item? Re-rank if necessary.

Step 6. Present the group's definition of public participation to the general assembly, using the flip chart. Record any additional ideas raised by the other groups in your notebooks.

Step 1. Define public participation.

Step 2. Record and rank items.

Step 3. Record additional ideas raised in the general assembly.

Evaluation

This technique of identifying individual issues and introducing them into the entire group for consideration is a form of small group behavior called nominal group process. Evaluate this technique:

- Do you feel that it was successful in achieving the objective?
- Do you feel that it encouraged participation by all individuals?
- What was positive about the technique?
- What was negative?
- Can you suggest any changes in the technique which might make for improvement?

Remember, nominal group process is a technique you might use someday in working with the public. See the Appendix to Manual section 1601 IVA.6 for a breakdown of how this process might be used in planning.

Citizen Participation Defined

1. Definition from Transportation Planning.

   The Highway Research Board of the National Research Council published in 1973 a volume entitled Citizen Participation in Transportation Planning. This report is based upon two conferences held in 1973 which examined issues related to public involvement in planning for transportation needs. At one of the conferences, the participants developed the following definition of citizen participation:

   > "Citizen participation was defined as an open process in which the rights of the community to be informed, to influence, and to get a response from government are reflected and in which a representative cross section of affected citizens interact with appointed and elected officials on issues of transportation supply at all stages of planning and development. The participants in the process identify and examine all reasonable alternatives and their consequences to assist the appropriate decision-makers in choosing the course that they believe to be needed and that they feel will best serve the needs and objectives of the community."

2. Elements of the Definition.

   a. An open process. . .

   suggests that the interaction between the public and officials is not rigid or tightly structured. Those who have responsibility for the designing of the process leave opportunities for questions to be asked, agenda items to be generated from the "audiences," redefinition of the problem, reconstitution of priorities. Both the public and officials share power in deciding what should be the substance and how the process should work.

b. The rights of the community to be informed, to influence, and to get a response from government . . .

1. Information, education and understanding are necessary for the community to assess its needs and formulate goals in the light of opportunities to participate in the problem-solving and management responsibilities of a given agency. In order to have meaningful public participation and to receive input which BLM can readily utilize, it is essential that the community understand the problem.

2. Speaking in terms of "the right of the community to influence government" suggests a participation process which is much more than a ritual in which public input is made, but one in which the agency has full discretion on what to accept and what to reject. Inherent in this definition is a working principle that the public should influence gpvernment, whether or not government wants to be influenced.

3. The right "to get a response from government" enables the community to evaluate how well it has communicated to the agency, how well the agency understands its desires, and whether the agency is adequately responding to the community. Good feedback from the agency can provide a valuable guide to the members of the community to determine what they've accomplished and what they should next seek to do. Feedback can also clear up confusion and minimize misunderstandings. In the long run, the input - feedback process can lead to a more efficient use of both agency and community time, energy, and resources.

4. The components of being informed, influencing government, and the government responding to the community are a continuum of interactions. The open process is a dialogue in which the mutual sharing of information, ideas, and goals is integral with achieving agreement and deciding policy.

5. This participation process is not defined as:

   - an important tool to reduce controversy;
   - a way to eliminate conflict;
   - a means to gather support for agency proposals.

Rather, the elements of being informed, influencing, and getting response from government are defined as rights of the community. This addresses the fundamental basis of relationship between agency and community. To define the participation process in terms of rights of the community means that the agency is accountable to the community. The agency should serve the community, it should be responsive to the community, the community should have the power to successfully influence the agency.

c. A representative cross section of affected citizens. . .

The participants are not to be just any citizens in the community, but the affected ones. Too often agencies translate participation into involving the existing, well-known community leaders, whether or not they are affected by the problem, and even though they often already have access to the decision-making process. Having participation by the affected citizens in itself requires public input on consequences of given problems and who is affected by them, since the agency acting alone is not always able to make a determination on who constitutes the full range of affected people. This includes people who are affected, no matter if they are part of a local, regional, or national constituency. A representative cross section means involving the full range of affected groups with participants being representative of the interests of the group to which he/she is a member.

d. At all stages of planning and development. . .

The planning procedures for URA, MFP, and Environmental Assessment acknowledge the interrelatedness of data gathering, assessment, and policy formation and the need to integrate these steps into a coherent framework. Similarly, if citizen participation is to have meaning and be successful, then the dialogue between citizens and officials must continue at every significant point of planning and development which contributes to final implementation. In cases of controversial actions, successful inclusion of the public at all significant points will help increase trust and reduce hostility.

e. The participants in the process identify and examine all reasonable alternatives and their consequences. . .

The generation of alternatives by the public may not be a particularly efficient process, and many of the solutions offered may not be at all viable; nevertheless, this is a process in which the alternatives selected are, in themselves, important direct expressions of the concerns and desires of the citizens, as well as indicators of their preconceptions and their understandings regarding the problems.

Defining a problem and devising solutions are processes which draw heavily upon the values, understandings, and backgrounds of those involved in these processes. In a sense, defining what the problem is, concurrently is also saying what the problem is not. Determining who and what are impacted is also stating indirectly who and what are not impacted. The public often will focus on what has already been highlighted, which can be a severe impediment to recognizing what else should be there. Having the public participate in the identification/definition process helps reduce this problem of focusing.

The charge to examine all reasonable alternatives should enable the public to comprehend what are the choices which they can make. Moreover, examining just the proposed alternatives is not sufficient; their consequences must be examined as well. Such an analysis should lead to understanding the advantages and disadvantages of each option.

f. Best serve the needs and objectives of the community. . .

The concluding phrase reiterates the agency's fundamental responsibility to serve the community.

Section 3:

Organinizing and Planning a Program

ORGANIZING AND PLANNING A PROGRAM

Any activity that requires citizen involvement will require comprehensive planning. The purpose of public planning is to develop a series of actions that systematically informs citizens of the issues; educates them about needs, alternatives, and consequences; and provides methods for realistic participation and feedback. Each plan will vary depending on the type of activity, characteristics of the community, and other constraints such as time, staff, and funding. Whoever has the responsibility for organizing a public participation function must methodically analyze these factors in conjunction with citizens early in the planning process.

Three planning models are offered by the Citizen Involvement Training Project, developed by the Division of Continuing Education, University of Massachusetts. The program provides training workshops, materials, and consulations to citizen groups. An excerpt from one of the manuals, Planning, for a Change*, offers alternatives that can be reviewed and used for planning a public participation program. Of significance to the public participation coordinator is the logical progression of ideas that will ultimately lead to a decision in which community members have participated to the greatest possible extent. A review of these models will help determine which one, or what combination, is most appropriate for the type of audience and type of project in a given situation. After reading the materials, determine which model best meets your requirements. Also, the materials can serve to inform groups of a systematic method of planning.

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*Learning Resource #2: Duane Dale, "Overview of Planning," from Planning, for a Change, Citizen Involvement Training Project, University of Massachusetts, 138 Hasbrouck, Amherst, MA 01003

OVERVIEW OF PLANNING

The purpose of this manual is to give you a "bag of tricks" for planning. Remember the black leather bags that doctors used to take on house calls? (Do you remember when doctors used to make house calls?) Imagine the tangle of tools if those big bags had no compartments. In this section, we'll give you some "compartments" to help you sort out the planning tools coming up.

What is Planning?

Planning is a sequence of steps, a method of getting to your goal, a "recipe" for group action, an image of the future as you hope it will unfold.

"All we ever do is talk. I want to see some action."

Every group has spokespeople for that position, and rightly so. But good planning is more than "just talk." Here are some of the things you can hope to accomplish with a careful plan:

> CLARIFY CHOICES: You'll know what paths you *didn't* choose from the start and can avoid having one-third of the group split ranks mid-way through a project and decide that "we'd rather hold a bazaar." Put it another way: If you consider several different program ideas and check member interest in each, you'll know how committed people are from the beginning.
>
> LET EVERYONE KNOW WHAT HAPPENS NEXT: This keeps individuals "plugging away" and provides a basis for teamwork.
>
> AVOID OR ANTICIPATE DIFFICULTIES: Shortages of money, uncooperative local officials, and bad weather are a few of the problems that can plague good programs. Planning can help you anticipate, avoid, or work around them.
>
> PROVIDE INSPIRATION: Everyone knows that the sequence of activities (no matter how complicated or difficult) is leading toward a goal that is important to the group. The plan becomes a source of inspiration, by providing the assurance that "it's all going someplace."

Product and Process

When architects plan buildings, they are designing (planning) a *product* (the structure we will see) and also planning the construction *process*. If the process is a conventional one, we don't think much about it; we assume that the building can be built because we have seen so many other steel and glass skyscrapers or brick homes or whatever. But if the architect's sketch shows a roof of rippling, free-form concrete -- like nothing we ever saw before -- we want to know whether it can be built. "How will you do that?"

Perhaps we listen with skepticism as the architect explains: "I will mound earth with bulldozers, then lay down steel reinforcing rods, and pour the concrete over them. Then I will dig the earth out from under the roof." The architect has specified a sequence of steps -- a *process* -- which she thinks (or hopes) will lead to the desired *product*.

Social action projects often choose unconventional goals. One of the things we accomplish by planning is to make sure there's a *workable* process for achieving those goals.

"Models" of the Planning Process

The "Model" is where we provide the mental "storage compartments" for the planning tools that will follow. We're using "model" in the sense of an *example* -- an outline to follow, an image of how the planning process might proceed. There are any number of possible procedures and combinations of procedures, though many of them have similarities. We'll present three, and you can decide which version you like best.

MODEL NUMBER 1: A BASIC PROGRAM-PLANNING MODEL

This approach is based on the outline that foundation and government funding proposals often recommend or require, namely:

- State project *Goals and Objectives*
- State *Methods* (project description)
- Specify *Implementation Procedure*
- Specify *Evaluation Procedure*

That's fine for a proposal outline, but since we need to be more concerned about how the program is developed, we would expand the outline to one more like the model below.

• Identify needs of community and organization • Review organization's purposes and goals • Reconcile needs with goals	→ State project *Goals and Objectives*
• Develop alternative program ideas • Assess desirability and feasibility • Select best program method	→ State *Methods* (project description)
• Develop detailed plan, contingency plan, staffing, pattern, time-line etc.	→ Specify *Implementation Procedure*
• Determine evaluation criteria • Select data-gathering process • Develop evaluation questions	→ Specify *Evaluation Procedure*

MODEL NUMBER 2: A PROBLEM-SOLVING APPROACH

This model is typical of the approach followed by organizations that train people in problem-solving and creative thinking. It can be applied to program design and also to troubleshooting when you have a program in operation that isn't up to par.

There are several bits of wisdom -- problem-solving principles -- which provide the cornerstones of this approach:

- Problems aren't always what they seem to be at first glance. The way you state the probem directs your attention to one type of solution or another, so it's important to play with different wordings of the problem and discover which seem most fruitful.

- No *one* method can be guaranteed to lead to a solution. Sometimes it helps to clarify the ideal (goal); sometimes it helps to state what the present situation is; sometimes it helps to explore different interpretations of "What causes this problem?"

- There is probably no such thing as a *totally* new idea. For instance, the pocket calculator is an invention that puts together several earlier inventions, such as the integrated circuit chip and the light-emitting-diode display. So: once you have refined your problem statement, it's useful to inventory the existing methods or inventions that may contribute to a solution. You will still be faced with the creative challenge of combining ideas into a new product or program -- perhaps unlike anything that has ever been tried before.

- The first solution is rarely the best. Generate lots of possible solutions, then choose several for refinement.

With these principles as background, consider this version of the problem-solving process on the following page.

In this manual, we draw on the problem-solving approach as a way of generating program ideas. In other words, we build parts of model number 2 into model number 1.

Problem-Solving Process	*Example*
1. State problem situation in broad terms.	*Organization has no money in treasury.*
2. Analyze the nature and causes of the problem situation.	*No dues; no fund-raising events; inflation caused cost overrun on last project.*
3. Describe ideal situation	*Ideal: $2,000 in bank; adequate money for next project.*
... and present situation.	*Present: No money; projects not being developed because they don't seem affordable.*
4. State alternative versions of the problem.	*No money; projects aren't being developed; morale is low; opportunities are being missed.*
5. Choose one version of the problem (or a combination) to pursue.	*Opportunities are being missed because morale is low, and therefore new projects are not being developed.*
6. Inventory existing solutions.	*Hold fund-raising events; develop low-budget or zero-budget projects, identify opportunities and decide how to pursue them (should also build morale); ask the group, "What would we be doing if we had $2,000 in the bank?"*
7. Generate new solutions (probably a synthesis of existing solutions).	*Hold an organizational meeting to explore opportunities, low-budget project ideas, etc. (mixture of strategies from step number 6).*
8. State guidelines for choosing ("decision criteria") and select best solution.	*We want activities which will bring in money and encourage people to get acquainted, so we'll hold a benefit dinner-dance.*
9. Implement and document.	*Do it! Keep a log, journal or up-dated time-line to keep track of the process and its progress.*

MODEL NUMBER 3: THE 4-STROKE INTERNAL COMBUSTION ENGINE APPROACH

Finally, just to demonstrate that any sort of "model" can shed some light on the planning process, consider the ways that planning processes are like the four strokes of a gasoline engine:

> *INTAKE*: Information is taken in about the problems, needs, goals, objectives, resources, and existing strategies. Just as the combustion chamber is expanding, so also are the ideas under consideration in this planning stage.
>
> *COMPRESSION*: The combustible materials are compressed, or perhaps "digested," into usable form. There is an attempt to *narrow* the amount of information into useful summaries, eliminating that which is extraneous.
>
> *IGNITION*: Something new is generated from the ingredients: energy from the engine, program ideas from the planning process (again, the ideas are expanding).
>
> *EXHAUST*: This is a narrowing stage. The piston is moving in the engine, driving out the exhaust gases. And at this point in the planning process, the group is choosing from among its options, narrowing things down to the best program option, and perhaps preparing to repeat the four-step cycle on the level of detailed implementation steps.

In short, the process of inventing and choosing program options can be seen as one of alternately expanding and narrowing the group's thinking.

The Environmental Protection Agency has specific planning requirements for its personnel involved with organizing and evaluating public participation activities. A course that presented public participation concepts and skills was conducted for EPA personnel by Barry Lawson Associates, Inc. (Learning Resource #3). The course manual, developed to support course activities, contains information that can be useful to all those involved with developing a planning and management document to structure a public participation program. Much of the information in the following section is based on material contained in the course manual.

A public participation workplan defines the structure and sequence of public involvement activities to allow for adequate staff, funds, and other resources. The workplan represents a written commitment to the citizens of the community that can be evaluated for effectiveness. It also can be used as an information document for interested citizens and groups.

Workplans should provide the details that structure public participation activities into project planning and decision-making. It should clarify program goals and objectives; identify target publics; specify consultation, information, and notification techniques and approaches; provide approximate completion dates for products such as fact sheets; detail the timing of responsiveness summaries and staff and budget resources; and describe the purposes of proposed activities. Developing a public participation workplan should be a public process. Citizens and officials can make sure the ideas and techniques proposed in the workplan meet community needs and conditions. An early and continuing role for the public should be established in the process. Citizens and officials can use the workplan as a document that tells them what to expect from a project, the timing of major decisions, and the most important times for public involvement. As a management tool, a workplan matches objectives with techniques that will help to reach stated goals. It provides a mechanism to allocate staff and budget resources, establish time schedules for events and publications, and provides the basis for long-term planning and priority setting. Successful management requires a plan with critical actions identified; a workplan represents just such a document by providing structure and order to public involvement activities. The elements of a public participation work plan include:

A statement of the goals and objectives of the proposed program.

A proposed schedule for public participation activities designed to affect major decisions, including an identification of the major decision points where response to citizen recommendations can be addressed.

An identification of the target publics for potential involvement.

An identification of the consultation, information, and notification activities proposed for the project or plan, along with an approximate time schedule for their use or application; the purpose of each activity should be described briefly so that citizens interested in the project have a sense of the conceptual base of the participation program; a description of the products of the participation programs, such as fact sheets, brochures, slide-tape programs, and public displays, should be included; where appropriate, publicity methods should be described.

An identification of the staff contacts and budget resources devoted to public participation.

An exercise that can help individuals determine and define the components of a public participation workplan is provided.*

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*Learning Resource #3, Public Participation Concepts and Skills, Barry Lawson Associates, Inc., 148 State Street, Boston, MA 02109.

WORKPLAN EXERCISE

Purposes

- To teach participants how to plan out a public participation program

- To provide participants with a workplan chart as an on-the-job aid which structures the preparation of a workplan

Concept

This exercise uses a simulation to help participants learn and practice the concepts and skills necessary to prepare a public participation workplan. Participants will be given a hypothetical community or state setting, and -- working in groups of 4 to 6 -- will develop a workplan to address public participation on a community issue. The settings are designed for each of the four major program areas of the workshop.

The exercise will be divided into two steps. As the first step, participants will be given a simple flow chart of the key decision points or tasks in their program. Using a set of colored cards representing different public participation techniques, they will quickly sketch out a "rough draft" public participation program keyed to the major decision points or tasks.

In the second step of the exercise, participants will review their public participation program in light of criteria such as achieving a balance of information and consultation activities, the cost of different techniques, the specific purpose of each activity, and the target publics to be addressed.

FLOW CHART OF KEY DECISION POINTS	PUBLIC PARTICIPATION WORKPLAN									
PUBLIC PARTICIPATION ACTIVITY										
INFORMATION OR CONSULTATION										
PURPOSE										
TARGET PUBLICS										
DISTRIBUTION OR PUBLICITY METHOD										
LEAD TIME REQUIRED										
ROUGH COST ESTIMATE										
COORDINATION WITH OTHER PUBLIC PART. PROGRAMS										

DEWEYPIPET

OVERVIEW: Deweypipet is a small city in the eastern part of the state. It is beginning to confront the typical problems of growth, one of which is the issue of treating sewage in the higher density areas of the town. It is located on a scenic lake and in addition to steady increases in year-round population, second-home and recreation development has increased significantly in the last ten years.

POPULATION: The present population of Deweypipet is 12,000, which represents a 50% increase in just the past ten years. In addition to this year-round population, there are approximately 600 summer and weekend residents, plus about 1,000 tourists and short-term visitors each year. People who have lived in Deweypipet longer than ten years tend to be older, somewhat less affluent, and often more conservative politically. Newer residents are mostly young executives and their families lured to the community by job opportunities in a nearby city, and the scenic attractions and pleasant atmosphere of Deweypipet. Summer residents tend to come mostly from a large city two hours away by car. Projections indicate a small but continuing rate of increase in tourism, and moderate growth in the number of both summer and year-round residents.

ECONOMY: A majority of the working people in Deweypipet have jobs outside the community. Within Deweypipet itself, there are two small factories, a number of stores, an automobile dealership, a motel, and two restaurants. There is also a handful of working farms in the area. Deweypipet has a mixture of "bluecollar" and management workers, with the older residents tending more toward blue collar jobs and the newer residents tending more toward management. Unemployment is about 6%. A small daily newspaper is published in Deweypipet, and there is one radio station catering to the younger set. All other media are located in a larger community 30 miles away.

PHYSICAL CHARACTERISTICS AND LAND USE: The terrain around Deweypipet is flat to gently rolling, with good soil characteristics for construction and for use of septic systems. The dominant feature in the area is Lake Deweypipet. There is a cluster of medium-density residential development around the lake, and another cluster near the town center -- which also contains most of the commercial and industrial development. The remainder of Deweypipet tends to be low-density, with a number of very large land holdings.

TAXES: There has been a steady rise in local taxes over the past few years, corresponding with the need for increased services brought on by growth. Several citizens have vowed to fight any additional tax increases.

WATER QUALITY PROBLEMS: At present, Deweypipet has no community sewers or municipal wastewater treatment facility. Septic systems in the town center and in the more densely settled areas around Lake Deweypipet have been failing, and this constitutes the principal water quality issue. Of the two factories, one produces very little effluent and has an adequate treatment system of its own; the other produces a fairly large amount of effluent but has a good in-plant treatment system. Both of the plants discharge into small streams which feed into Lake Deweypipet. The 208 planning agency has also identified water quality problems stemming from agricultural runoff, and potential erosion and runoff problems if development continues around the lake. The proposed Step One budget is $100,000 on a project that could well top $5 million in construction costs.

COMMUNITY ORGANIZATIONS: There are several community organizations active in Deweypipet, including a Businessmen's Association, a chapter of the League of Women Voters, several church groups, and some sports clubs, along with several individuals who are active in tax and environmental causes.

PROFILES OF PUBLIC OFFICIALS AND PROMINENT INDIVIDUALS: Profiles of important opinion-leaders in Deweypipet are as follows:

The Mayor is 40 years old, and runs a shoe store. He has lived in Deweypipet all his life, and is fairly conservative -- especially on fiscal matters. He thinks sewers would be good for Deweypipet if they would help bring in more industrial and commercial development, but is concerned about the influx of newcomers, who are taking over the town and changing the way things have always been.

The Town Councilor was elected to the Town Council as an unopposed candidate. She ran for the office because she did not want the Council to get too radical in its approach, as town councils in neighboring towns have tended to do. She is 50 years old, and a lifelong resident of the town.

The County Sanitarian is very concerned about water pollution in Deweypipet and considers himself an environmentalist (although he is not a member of any environmental groups). He thinks that Deweypipet should use available federal and state funds to prepare realistically for the future. Since people are attracted to the town, some changes must occur, and available money should be used to wisely anticipate the problems that will occur.

The local environmental activist is very interested in wastewater treatment issues. He feels very strongly about both water quality and growth problems, and wants to make sure that water quality is fully safeguarded, but also that excess growth is not brought about in the process.

The High School Civics teacher is a recent arrival in town, but seen by many as a "sensible voice" in community affairs. His interest in the wastewater treatment issue is prompted by a desire to learn more about the local decision-making process. He also hopes to be able to use the issue as a case study for his civics classes.

The local tax lobbyist is the president of her own accounting firm and was instrumental in forcing the recent decision to scrap plans for a new Deweypipet civic center. She intends to keep a sharp eye on the cost of whatever solutions are proposed for Deweypipet's water pollution problems.

The President of the Deweypipet League of Women Voters has made it a point to become active in the sewer issue because of strong interest among the membership. The most frequently expressed concerns have involved taxes, water quality, and growth. She wants to make sure that all facts receive full disclosure, and, above all, wants to see that the public has every opportunity to become involved.

SUMMARY

A review of the workplan exercise should define the significant actions to be taken. Review the following questions with those who participated in the simulation or as a review of the workplan.

> Can the goals and objectives stated in the workplan be met?
>
> Can the combined effect of the proposed methods and techniques produce effective public involvement?
>
> Do the targeted publics seem to represent a cross section of potentially affected publics? Are some obvious target publics missing?
>
> Do proposed consultation activities provide for adequate feedback to the public about how its information and opinions have been used?
>
> Do public participation elements relate to key decision points in the planning process?
>
> Does the proposed workplan reflect a realistic understanding of the staffing and time requirements to perform public participation? Materials preparation? Distribution and mailing? Staff availability? Timing? Actual costs?
>
> Does the workplan budget seem cost effective? Does the workplan suggest that program elements will build upon existing community committees, newsletters, service groups, and other organized groups?
>
> Do the proposed actions identified in the workplan meet the regulatory requirements? Does the workplan identify:
>
> - Staff contacts?
> - Budget resources?
> - Schedule of major consultation activities keyed to major points?

- Schedule of major information products occuring prior to consultation points?
- Identification of information mechanisms?
- Identification of target publics?
- Identification of the program as full-scale or basic for the 201 construction grants program?
- Inclusion of an advisory group, including a description of its role and responsibilities?

Are the budget figures realistic compared to other projects of a similar size and community?

Does it appear that the workplan has been developed to meet the specific conditions and needs of this project, or has a "boiler plate" workplan been added to a grant application? Is the workplan project specific? Is it problem-solving in its orientation?

Does it appear that the workplan was reviewed by representatives of the community? By an advisory group?

Section 4:

Information Dissemination

INFORMATION DISSEMINATION

The information dissemination phase of a public participation program must begin with the initial workplan and continue until an acceptable community decision is reached. Methods for informing the public will vary but will probably include newspapers, radio and television, newsletters, fact sheets, other direct mailing, speeches, reports, meetings, and conferences.

Early efforts should be directed toward the general public. Those who participate will require education on both the specific issue and the public participation process. The remainder of the public should not be excluded at this time but rather should be kept informed by systematic information dissemination procedures.

Many information dissemination techniques are available for use, but choices should be made carefully. The public is generally selective regarding messages from the media. That fact, in combination with a possible mistrust of government motives, requires that an attempt be made to convey unbiased factual information. Adequate and well-prepared information can familiarize the public with the nature and scope of the concern. Certain key groups within the community must be made aware of the issue directly. The U. S. Army Corps of Engineers has outlined* the following publics concerned with water resources development projects:

1. Individual citizens, including the general public and key individuals who do not express their preferences through, or participate in, any groups or organizations.
2. Sporting groups.
3. Conservation/environmental groups.
4. Farm organizations.
5. Property owners and users, representing those persons who will be or might be displaced by any alternatives under study.
6. Business and industrial groups, including the Chambers of Commerce and selected trade and industrial associations.
7. Professional groups and organizations, such as the American Institute of Planners, American Society of Civil Engineers, and others.

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*U.S. Army Corps of Engineers, Public Participation in Water Resources Planning, EC 1165121100, Washington, DC, May 1971.

8. Educational institutions, including universities, high schools, and vocational schools. General participation is by a few key faculty members and students or student groups and organizations.

9. Service clubs and civic organizations, including service clubs in a community such as Rotary Club, Lions Club, League of Women Voters, and others.

10. Labor Unions.

11. State and local governmental agencies, including planning commissions, councils of government, and individual agencies.

12. State and local elected officials.

13. Federal agencies.

14. Other groups and organizations, possibly including various urban groups, economic opportunity groups, political clubs and associations, minority groups, religious groups and organizations, and many others.

15. Media, including the staffs of newspapers, radio, television, and various trade media.

A process has been developed by the U. S. Department of the Interior, Water and Power Resources Service, to further identify the publics.* By reviewing this system, as outlined in Chapter 6 of that volume, coordinators can ensure that the community is represented.

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*Learning Resource #4: "Chapter 6 - Techniques for Identifying the Public," Public Involvement Manual: Involving the Public in Water and Power Resources Decisions, by James L. Creighton. U.S. Water and Power Resources Service.

TECHNIQUES FOR IDENTIFYING THE PUBLIC

At the beginning of each public involvement program a systematic effort should be made to identify those publics who are likely to see themselves as impacted by a decision. As indicated in the previous chapter, there are several reasons why this analysis is recommended:

1. To ensure the representativeness of the active minority that will participate in your public involvement program.

2. To establish credibility by informing potentially impacted publics, rather than by having them "discover" that they might be impacted.

3. To get potentially impacted publics involved early in the process while they can exert some influence, rather than late in the process when they are forced into a supporter/adversary relationship.

This chapter will describe the techniques which can be utilized in identifying those publics most likely to be involved in your public participation program. Be aware that the process utilized in your public involvement program should be documented, and will be described in your public involvement plan.

MAJOR APPROACHES IDENTIFYING THE PUBLIC

There are three major sources of information about publics which perceive themselves as potentially impacted by a decision. These are:

1. Self-identification

2. Staff identification

3. Third-party identification

Self-Identification: Self-identification simply means that individuals or groups step forward and indicate an interest in participating in the public involvement program. This self-identification is in response to news stories, brochures, newletters, etc. put out by the agency. Well-publicized public meetings are also a way of generating self-identification. Anyone who participates by attending a meeting, writing a letter, or phoning a hot line has clearly indicated an interest in being a participant in the program. Anyone who has expressed such an interest should be quickly placed on the mailing list and be continually informed of program activities.

Staff Identification: Another major source of information about possible participants is WPRS staff, the staff of other agencies, and readily available reference books. Along with self-identification, these are some of the quickest and most efficient methods of identifying participants. They include:

1. Intuitive/experiential information: Most agency staff that have worked in an area for some period of time can, if asked, immediately begin to identify individuals and groups that are likely to be involved in any new study. One of the richest sources of information for possible individuals or interests to be involved would be internal staff who have worked in the area for some period of time.

2. Lists of groups of individuals: There are numerous lists available which can assist in identifying the publics. Among these lists are included:

    - Yellow Pages
    - Chamber of Commerce Lists
    - Newspaper Lists
    - City and County Directories
    - Direct Mailing lists of groups and various types (these must be purchased)
    - Lists maintained by Sociology and Political Science Departments.

3. Geographic Analysis: Just by looking at a map it is possible to identify publics who rely on water-related uses for agricultural, municipal, and industrial water; recreation, power; etc.

4. Demographic Analysis: The U. S. Census Bureau maintains considerable information on demographics; e.g., age, earnings, race, etc. These may be useful in identifying publics that may not be self-identifying, such as minority groups.

5. Historical Analysis: In many cases there is considerable information in old files. This includes:

    - Lists of previous participants in other public involvement programs in the area.
    - Correspondence files.
    - Newspaper clippings regarding similar issues.
    - Library files on past projects.

6. Consultation with other agencies: Since numerous agencies have held public involvement programs on issues that may be similar, it can often be useful to explore their files or consult with them concerning possible publics. Examples of this approach might include:

   - Consultation with U. S. Forest Service, U. S. Army Corps of Engineers, Bureau of Outdoor Recreation, State Fish and Game Department, etc.

   - Examination of HUD 701 or EPA 208 participant lists.

   - Consultation with local planning staff concerning participation in land-use planning studies.

   - Direct interviews with study managers of previous studies for other agencies who may be able to provide substantial information about the total political climate in which the study will be conducted.

7. User Survey: When an area is heavily used by recreationists there frequently are records kept, such as permits issued or some other form of registration at the recreation site, which can identify many of the user publics.

Third-Party Identification: The third way to obtain information about other interests or individuals which should be included in the study is to ask an existing advisory committee, or representatives of known interests, who else should be involved. One variation on this theme is to enclose a response form in any mailings inviting people to suggest other groups that should be included.

These relatively informal techniques can be augmented, if needed, by the more formal version of third-party identification used by sociologists attempting to identify leadership within the community. The sociologist's technique applied to WPRS decisions would utilize the following steps:

1. Develop a list of readily identifiable leadership within the community based on available published literature, newspaper stories, or discussions with other state and federal officials involved in water resources planning and management.

2. Conduct a series of interviews with these identified influentials. During these interviews ask them to identify which individuals they think would be most influential in making decisions. As an example, in the Susquehanna Communication-Participation Study, a study conducted for the Army Corps of Engineers' Institute of Water Resources, the question asked of each interviewee was: "Suppose a major problem in water resources development was before the community, one that required a decision by a group of leaders

who nearly everyone would accept. Which people would you choose to make up this group, regardless of whether or not you know them personally? Why would you choose them?"

3. After several interviews have been conducted it is usually possible to begin to develop a list of names which are frequently mentioned, and it is then possible in subsequent interviews to use the list either as a score sheet for the interviewer or actually have the person being interviewed review the names on the list, indicating those which he thinks are influential and adding additional names if desired.

4. Interviews are continued then with all of those people identified on the list of influentials. In effect, this technique is a "snow ball" approach in which you ask visible leaders who they consider to be influential, then interview the people they've identified to ask who they consider to be influential, etc.

Clearly such a technique can reach a point of diminishing returns and several studies have indicated that, beyond a certain point, the frequently mentioned individuals on the list did not change regardless of the number of interviews conducted.

As contacts are made, preparation of a comprehensive mailing list of those organizations and individuals likely to be interested in or affected by the action is imperative. The list should be maintained and supplemented as the public participation process evolves. It can be a useful tool for distributing newsletters, fact sheets, information on meetings and hearings, and for conducting surveys. Choosing the media to be used is dependent on the issue and available resources. In smaller communities not having radio or television capabilities, newsletters may be a more viable method than in a large community where the radio and television media can be effective.

The National Association of Broadcasters has prepared a booklet* to help individuals or community organizers obtain radio and television time. Sample radio and television public service announcements are included. It should be noted that the message is brief and provides all the necessary information.

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*Learning Resource #5: "If You Want Air Time," National Association of Broadcasters, 1771 "N" Street, N.W., Washington, DC 20036

SAMPLE

PUBLIC SERVICE ANNOUNCEMENT FOR RADIO

From:

AMERICAN EDUCATION
WEEK -- RHODE ISLAND

Frank W. Edwards
Publicity Director
Randolph Mason High School
Woonsocket, Rhode Island
FAilure 9 0600

For use Sunday,
November 14
through Saturday,
November 20, 1976

AMERICAN EDUCATION WEEK IN RHODE ISLAND

November 14-20

Time: 30 seconds

Words: 74

ANNCR: Drive by a school. Watch the faces of the hundreds of students as they come and go. These are the faces of the men and women who one day will govern this nation. During American Education Week, the teachers of Rhode Island invite you to watch this vital form of freedom in action. Visit your local school and observe techniques of instruction that help prepare our children for tomorrow. This is American Education Week.

SAMPLE

PUBLIC SERVICE ANNOUNCEMENT FOR TELEVISION

From:

Frank W. Edwards
Publicity Director
Randolph Mason High School
Woonsocket, Rhode Island
FAilure 9 0600

AMERICAN EDUCATION
WEEK -- RHODE ISLAND

For use Sunday,
November 14
through Saturday,
November 20, 1976

AMERICAN EDUCATION WEEK IN RHODE ISLAND

November 14-20

Time: 30 seconds

Words: 67

VIDEO	AUDIO
Slide No (School with many students walking alongside it)	ANNCR: Our nation's schools are home to millions of our children for 17 years of their lives.
Slide No (Lincoln Memorial with two children looking at statue)	America looks to these future citizens for the maintenance of the free world, and these students look to the great men of the world for some guidance to keep it free.
Slide No (American Education week visit Your Schools)	During American Education Week, visit your local school. Rhode Island teachers urge all of you to participate in this observance.

(Note: The blank following "Slide No." is for the station to insert its own identifying number of your slide).

Often federal and state regulations require that a public notice be placed in a newspaper to inform the public of a meeting topic or the location of a hearing. As a major responsibility in the information dissemination process, public participation coordinators should develop and refine the writing skills necessary to communicate issues concisely. The authors have selected the following group of notices to illustrate public notice techniques.*

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*Learning Resource #6: Barry H. Jordan, How to Write a Public Notice: A Collection of Examples, U. S. Environmental Protection Agency, Office of Water Programs Operations (WH-546) Washington, DC 20460.

Public Notices

One of the most common complaints voiced by agency staff and citizens is that public notices of hearings and meetings rarely generate public interest or attendance. Even when considerable agency resources are devoted to the task, hearings and meetings often may not be well attended. This booklet has been developed to provide a few principles regarding public notices, a public notice checklist, examples which have been used in environmental programs, and commentary on these examples which highlights their strong and weak points. This brief guide is for agency and grantee staff in the wastewater treatment construction grants program who have little or no experience in writing information for the public or working with the media. It is hoped, that the information and suggestions in the booklet will enable EPA, state agencies and local grantees to get the most out of the money spent on public notification.

The assistance received from the following people is gratefully appreciated: EPA regional staff for useful comments and several notice examples; staff of Headquarters Office of Water and Waste Management and Office of Water Program Operations for overall support and guidance; and Headquarters Office of Public Awareness staff for helpful ideas and graphics support.

Public Notification and "Public Notices"

Issuing "public notices" is one important aspect of public notification. It is certainly not the only thing an agency can do to stimulate interest in an upcoming event. Indeed, informal notification which uses the many existing communication "networks" in the public and private sectors is often the most effective way to spread the word. The fact remains, however, that agencies generally rely most heavily on the "public notice."

Why Do People Stay Away?

At the outset it should be noted that poor public notice is only one reason why people seem to avoid public meetings and hearings. Public apathy and widespread citizen suspicion of government programs is certainly a factor. There are at least six more specific reasons:

- The meeting or hearing is not preceded by a strong public information program; therefore the public is unaware of significant issues, decisions and impacts to be discussed.

- The meeting or hearing is not really important: there are no significant issues; no decisions to be made; and the agency program has little or no effect on anyone.

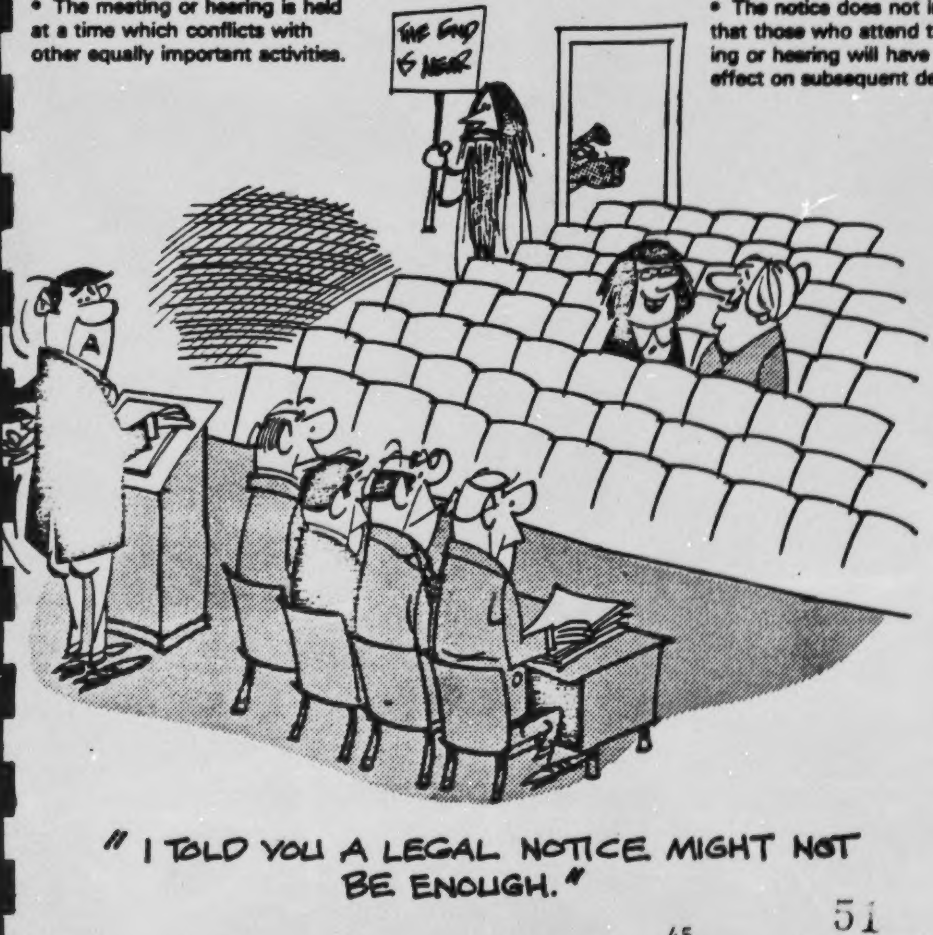
- The meeting or hearing is held at a time which conflicts with other equally important activities.

- The meeting or hearing is held at a time and place which is not convenient for the public.

- Widespread cynicism regarding government and public agencies causes many citizens to feel their participation in the meeting or hearing will accomplish very little.

- Based on past experience, citizens expect that, although the sponsoring agency is well-intended, the agency will not take adequate steps to explain complex issues or define difficult technical words and phrases.

If none of the above conditions exist, lack of attendance is often due to a poor job of public notification.



" I TOLD YOU A LEGAL NOTICE MIGHT NOT BE ENOUGH. "

Ineffective Public Notices

It is a relatively simple job to determine whether an agency's public notices are contributing to empty meeting rooms. This is because ineffective public notices exhibit one or more of the following characteristics:

- The notice is issued in such a way that few people see it, let alone read it.

- The notice does not give any reasons to attend the meeting or hearing: it does not highlight the issues to be covered at the meeting or hearing, particularly economic and environmental impacts; does not indicate what decisions will be made as a result of the meeting or hearing; and does not state the potential effects of these decisions.

- The notice does not indicate that those who attend the meeting or hearing will have any effect on subsequent decisions.

- The notice is written by someone with little or no experience in writing information for the public; i.e., the notice is merely a limp collection of confusing jargon which no one understands.

- The sponsoring agency relies primarily on the narrow "legal notice" use of the print media for public notification.

If one or more of the above are true, the sponsoring agency has an ironclad guarantee that the janitors will not be working overtime as a result of the meeting or hearing. The only exception to this is when the meeting or hearing will deal with an extremely controversial program or issue which has already enraged or polarized a significant number of people. In this case, the room will be filled no matter how bad the notice. In such a situation, where the "event" turns out to be a violent shouting match or perhaps even an old fashioned lynching, the sponsoring agency has more serious public participation problems than putting together a good public notice.

Five Principles of a Good Public Notice

Turning the above negative characteristics around into a positive framework results in the five basic principles of effective public notice:

- The notice must be issued so that it is highly visible to the potential "audience" well in advance of the meeting or hearing.

- The notice must be brief and to the point: it must highlight economic and environmental issues and decisions of concern to the public, as well as the implications of these issues and decisions.

- The notice must indicate how participation at the meeting or hearing will relate to subsequent decisions and the resolution of issues.

- The notice should be developed, or at least reviewed, by someone with experience in writing public information.

- The notice must be distributed through direct mailing to organizations and individuals, in addition to prominent media coverage. Direct contact such as phone call "networking," personal letters, or other "word of mouth" measures are often the most effective means of public notification. The phone call "network," using paid or volunteer staff has usually proven to be the best way to spread the word about a project or upcoming event. This is especially true in small community or neighborhood projects.

The Goal

Finally, the sponsoring agency should remember that the goal of public notification is not merely to fill the meeting room. It is, rather to reach the people who are likely to be affected by agency actions and decisions with the kind of information that will convince and enable a good cross-section of "interests" and individuals to participate constructively in the agency program.

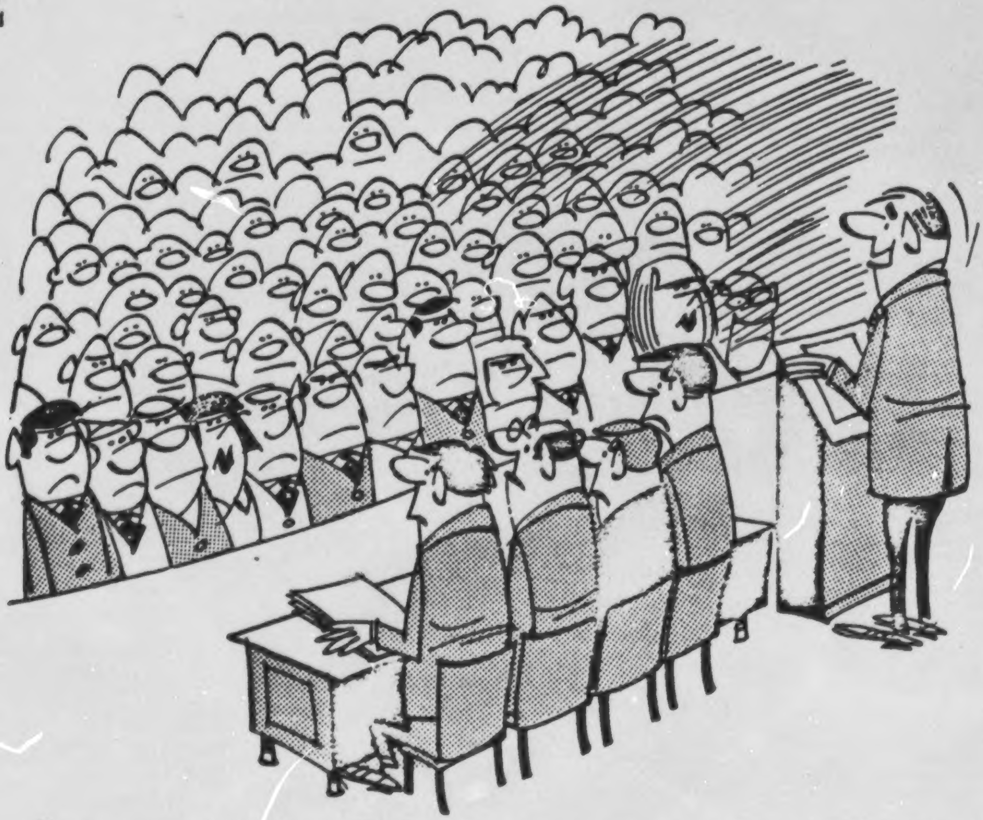
The following checklist is included as a brief reminder of the basic principles of a good public notice.

The examples and commentary in the final section are provided to illustrate all of the above points.

Public Notice Checklist

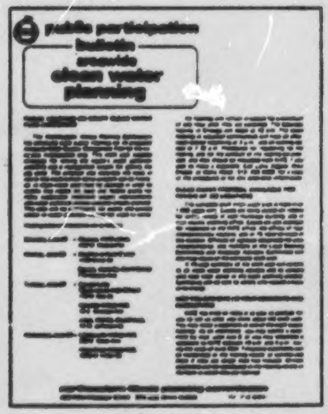
After assuring yourself that the event you are sponsoring is fulfilling a specific requirement or has some significance, and after scheduling the event for a convenient time and place, measure the public notice you are about to release against the following checklist:

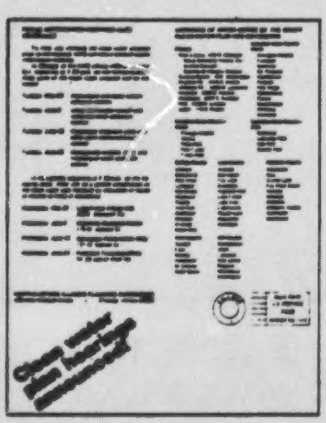
- Will the notice be displayed prominently in the media and posted so as to be highly visible sufficiently in advance of the event? Will a press release accompany the notice? Are other media contacts planned (press conference, reporters' briefing, feature article)?
- Does the notice emphasize why the event is being held? i.e., issues, decisions, effects?
- Does the notice also stress the importance of citizen attendance by stating how participation will affect decisions?
- Has someone with public information skills prepared or reviewed the notice so that irrelevancies and jargon are avoided and so that the notice is brief, easy to read, informative, and appealing? If meeting posters are used in addition to written notices, do these posters contain wording and graphics which will grab the viewers' attention?
- Will the notice be mailed directly to appropriate individuals and organizations? Is any other direct contact to be used to notify the public? Does the notice give a staff contact who can provide more detailed information on request?

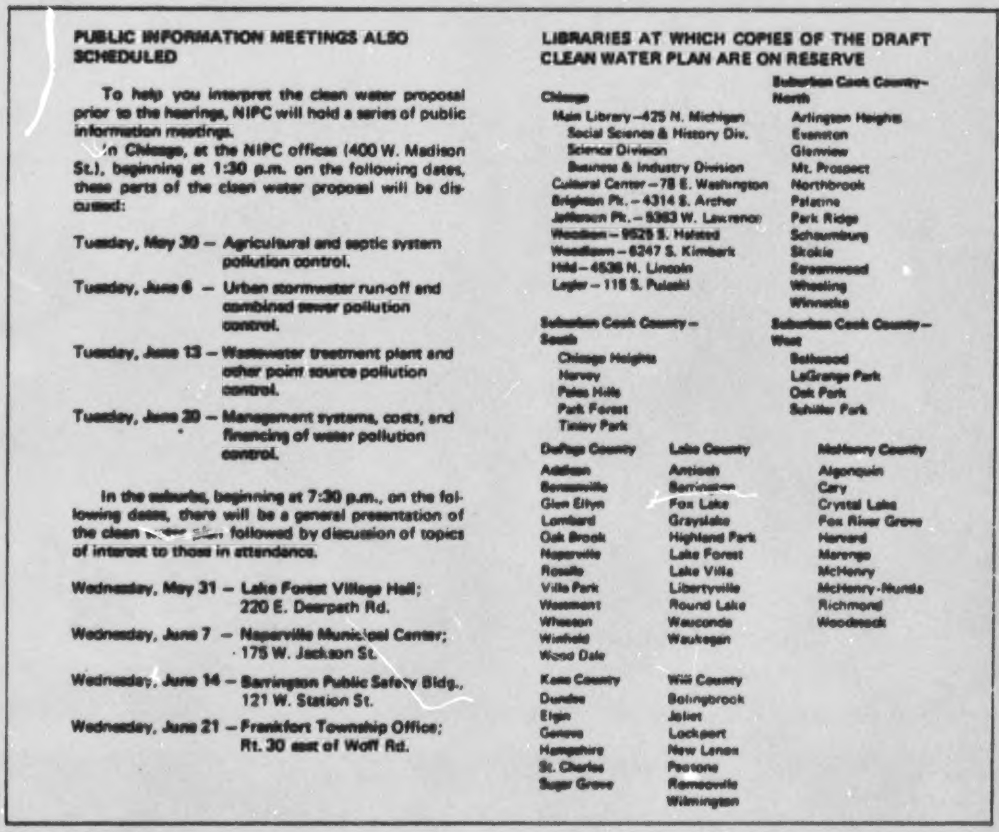


"CONTRARY TO WHAT YOU MAY HAVE HEARD, WE WILL NOT BE GIVING AWAY FREE TICKETS TO HAWAII TONIGHT. NOW, THE BOARD WOULD LIKE TO DISCUSS THE SEWER PROJECT."

Type	Good Features	Areas Needing Improvement
This is an excellent example of a meeting notice/mailer.	The cover calls immediate attention to the hearings. The information is clearly presented. A phone contact is given. Many depositories are listed, and the availability of a plan summary is noted. Information on how and when to make comments is given. The public has three options for commenting: hearing testimony (evening and weekend sessions included), telephone comments, or written statements. The notice informs the public of informational meetings being held prior to the formal comment period.	The notice would be improved by a better title ("208 Public Participation Bulletin" is not very exciting) and with a better section on plan contents which highlights major issues of public concern.







PUBLIC INFORMATION MEETINGS ALSO SCHEDULED

To help you interpret the clean water proposal prior to the hearings, NIPC will hold a series of public information meetings.

In Chicago, at the NIPC offices (400 W. Madison St.), beginning at 1:30 p.m. on the following dates, these parts of the clean water proposal will be discussed:

Tuesday, May 30 – Agricultural and septic system pollution control.

Tuesday, June 6 – Urban stormwater run-off and combined sewer pollution control.

Tuesday, June 13 – Wastewater treatment plant and other point source pollution control.

Tuesday, June 20 – Management systems, costs, and financing of water pollution control.

In the suburbs, beginning at 7:30 p.m., on the following dates, there will be a general presentation of the clean water plan followed by discussion of topics of interest to those in attendance.

Wednesday, May 31 – Lake Forest Village Hall; 220 E. Deerpath Rd.

Wednesday, June 7 – Naperville Municipal Center; 175 W. Jackson St.

Wednesday, June 14 – Barrington Public Safety Bldg., 121 W. Station St.

Wednesday, June 21 – Frankfort Township Office; Rt. 30 east of Wolf Rd.

LIBRARIES AT WHICH COPIES OF THE DRAFT CLEAN WATER PLAN ARE ON RESERVE

Chicago
- Main Library – 425 N. Michigan
  - Social Science & History Div.
  - Science Division
  - Business & Industry Division
- Cultural Center – 78 E. Washington
- Brighton Pk. – 4314 S. Archer
- Jefferson Pk. – 5363 W. Lawrence
- Woodson – 9525 S. Halsted
- Woodlawn – 6247 S. Kimbark
- Hild – 4536 N. Lincoln
- Legler – 115 S. Pulaski

Suburban Cook County – South
- Chicago Heights
- Harvey
- Palos Hills
- Park Forest
- Tinley Park

Suburban Cook County – North
- Arlington Heights
- Evanston
- Glenview
- Mt. Prospect
- Northbrook
- Palatine
- Park Ridge
- Schaumburg
- Skokie
- Streamwood
- Wheeling
- Winnetka

Suburban Cook County – West
- Bellwood
- LaGrange Park
- Oak Park
- Schiller Park

DuPage County
- Addison
- Bensenville
- Glen Ellyn
- Lombard
- Oak Brook
- Naperville
- Roselle
- Villa Park
- Westmont
- Wheaton
- Winfield
- Wood Dale

Kane County
- Dundee
- Elgin
- Geneva
- Hampshire
- St. Charles
- Sugar Grove

Lake County
- Antioch
- Barrington
- Fox Lake
- Grayslake
- Highland Park
- Lake Forest
- Lake Villa
- Libertyville
- Round Lake
- Wauconda
- Waukegan

Will County
- Bolingbrook
- Joliet
- Lockport
- New Lenox
- Peotone
- Romeoville
- Wilmington

McHenry County
- Algonquin
- Cary
- Crystal Lake
- Fox River Grove
- Harvard
- Marengo
- McHenry
- McHenry-Nunda
- Richmond
- Woodstock

BEST COPY AVAILABLE

BEST COPY AVAILABLE

public participation
bulletin
areawide clean water planning

PUBLIC HEARINGS ON DRAFT CLEAN WATER PLAN ANNOUNCED

The Northeastern Illinois Planning Commission has scheduled eight public hearings on its proposed Areawide Water Quality Management Plan for the six-county metropolitan area. This draft plan suggests strategies for solving the region's water pollution problems and a management system for getting the job done. The proposal also describes the ways in which this multi-billion dollar program can be financed. A clean water plan must be adopted in order to qualify this region for state and federal grants for many wastewater treatment system improvements and water pollution control projects already planned. This plan will be a blueprint for public and private action in water pollution control for years to come.

Hearing dates and locations are as follows:

Saturday, June 24 – Chicago; NIPC office,
400 W. Madison St.

Monday, June 26 – DesPlaines Civic Center
1420 Miner St.

Geneva; Kane Co. Gov't Center
719 Batavia Ave.

Tuesday, June 27 – Crystal Lake
North Union High School
170 N. Oak St.

Hinsdale Village Hall,
19 E. Chicago Ave.

Joliet; Will Co. Courthouse,
14 W. Jefferson St.

Wednesday, June 28 – Libertyville Village Hall,
200 E. Cook Ave.

Hazel Crest Village Hall,
1818 W. 170th St.

All hearings will remain in session for a minimum of one hour after they are convened. The Saturday hearing in Chicago will begin at 10 a.m. The seven hearings in suburban communities will have an afternoon session beginning at 3 p.m., and an evening session at 7:30 p.m. Procedures for registering for the hearing, and for the conduct of the hearing are available, and they should be requested from NIPC if you plan to make a statement. Call Larry Aggens, Mike Chapin, or Marty Moser (312) 454-0400, for a copy of the procedures or for any additional information.

CLEAN WATER PROPOSAL AVAILABLE FOR REVIEW AT 350 LOCATIONS

The complete draft clean water plan is more than 1,000 pages long. Copies are being placed on reserve for public review in each municipal building, and in each county planning office. Copies are also available for inspection in the NIPC office, the offices of four intercommunity councils, and in 75 libraries listed in this bulletin. Officials of agencies designated for plan implementation, and members of the Local Steering Committees and Areawide Advisory Committee will also have copies of the complete draft plan.

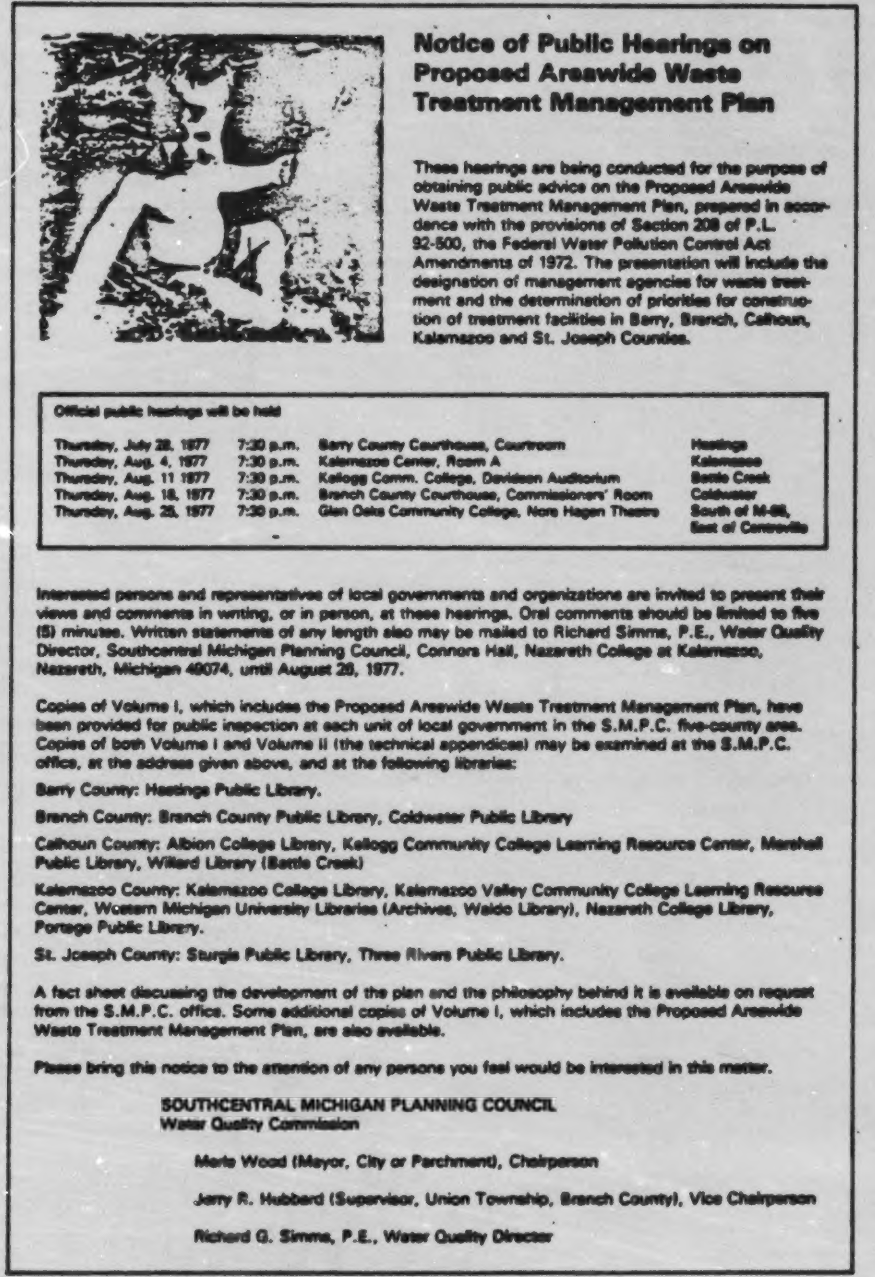
A 45-page summery of the draft plan will be sent to all clean water planning advisors and to persons who have been active in the basin planning process. Summaries will be sent to others who request a copy at no charge.

HOW YOU CAN GIVE US YOUR COMMENTS AND SUGGESTIONS

NIPC has tried to make it as easy as possible for you to tell us what you think about the draft plan. You may make a statement at one of the eight public hearings. As an alternative, you may submit a statement by mail, until July 8; or you may telephone a statement to NIPC between 10 a.m. and 4 p.m., during the week of June 26th. Telephone statements will be transcribed in the hearing record, or summarized there if they are longer than five minutes. Written statements will be reproduced in the hearing record in the form in which they are received.

northeastern illinois planning commission
400 West Madison Street, Chicago, Illinois 60606 (312) 454-0400

Type	Good Features	Areas Needing Improvement
This is an example of an alternative "legal" or "official" newspaper notice.	This format is an improvement over the usual obituary column associated with most hearings, and a fact sheet is offered to the public.	The notice would be improved by a more definitive or descriptive title, at least a listing of potential issues, and a telephone contact for more information.



Notice of Public Hearings on Proposed Areawide Waste Treatment Management Plan

These hearings are being conducted for the purpose of obtaining public advice on the Proposed Areawide Waste Treatment Management Plan, prepared in accordance with the provisions of Section 208 of P.L. 92-500, the Federal Water Pollution Control Act Amendments of 1972. The presentation will include the designation of management agencies for waste treatment and the determination of priorities for construction of treatment facilities in Barry, Branch, Calhoun, Kalamazoo and St. Joseph Counties.

Official public hearings will be held

Thursday, July 28, 1977	7:30 p.m.	Barry County Courthouse, Courtroom	Hastings
Thursday, Aug. 4, 1977	7:30 p.m.	Kalamazoo Center, Room A	Kalamazoo
Thursday, Aug. 11 1977	7:30 p.m.	Kellogg Comm. College, Davidson Auditorium	Battle Creek
Thursday, Aug. 18, 1977	7:30 p.m.	Branch County Courthouse, Commissioners' Room	Coldwater
Thursday, Aug. 25, 1977	7:30 p.m.	Glen Oaks Community College, Nora Hagen Theatre	South of M-86, East of Centreville

Interested persons and representatives of local governments and organizations are invited to present their views and comments in writing, or in person, at these hearings. Oral comments should be limited to five (5) minutes. Written statements of any length also may be mailed to Richard Simms, P.E., Water Quality Director, Southcentral Michigan Planning Council, Connors Hall, Nazareth College at Kalamazoo, Nazareth, Michigan 49074, until August 26, 1977.

Copies of Volume I, which includes the Proposed Areawide Waste Treatment Management Plan, have been provided for public inspection at each unit of local government in the S.M.P.C. five-county area. Copies of both Volume I and Volume II (the technical appendices) may be examined at the S.M.P.C. office, at the address given above, and at the following libraries:

Barry County: Hastings Public Library.

Branch County: Branch County Public Library, Coldwater Public Library

Calhoun County: Albion College Library, Kellogg Community College Learning Resource Center, Marshall Public Library, Willard Library (Battle Creek)

Kalamazoo County: Kalamazoo College Library, Kalamazoo Valley Community College Learning Resource Center, Western Michigan University Libraries (Archives, Waldo Library), Nazareth College Library, Portage Public Library.

St. Joseph County: Sturgis Public Library, Three Rivers Public Library.

A fact sheet discussing the development of the plan and the philosophy behind it is available on request from the S.M.P.C. office. Some additional copies of Volume I, which includes the Proposed Areawide Waste Treatment Management Plan, are also available.

Please bring this notice to the attention of any persons you feel would be interested in this matter.

SOUTHCENTRAL MICHIGAN PLANNING COUNCIL
Water Quality Commission

Merle Wood (Mayor, City or Parchment), Chairperson

Jerry R. Hubbard (Supervisor, Union Township, Branch County), Vice Chairperson

Richard G. Simms, P.E., Water Quality Director

Three Rivers Commercial, Three Rivers MI 6/27/77

Type	Good Features	Points to Consider
This is an example of a simple newspaper ad used to attract public attention prior to a public hearing.	The ad generated several phone calls for more information for two reasons: the ad was placed in a prominent location in a widely circulated newspaper, and the ad highlights a few dramatic issues related to the hearing.	The use of such an ad should be carefully considered. There is no question that a well done, well-placed ad will attract attention; however, caution must be used to avoid overstatement. The cost of such an ad is usually much higher than the cost of a legal notice, particularly in large metropolitan newspapers. It is not possible to *tell* a newspaper where to put a legal notice. Certain locations can be *requested* for display ads.

BOSTON HARBOR

- "NO SWIMMING" in Charles & Mystic Rivers
- "SHELLFISHING BANNED" in Inner Harbor
- 400,000 pounds of partially treated sewage & toxic waste flow into Boston Harbor daily

Does it have to be this way? Are you responsible? What do you want done for a clean Boston Harbor?

Let the U.S. Environmental Protection Agency know at a public hearing on:

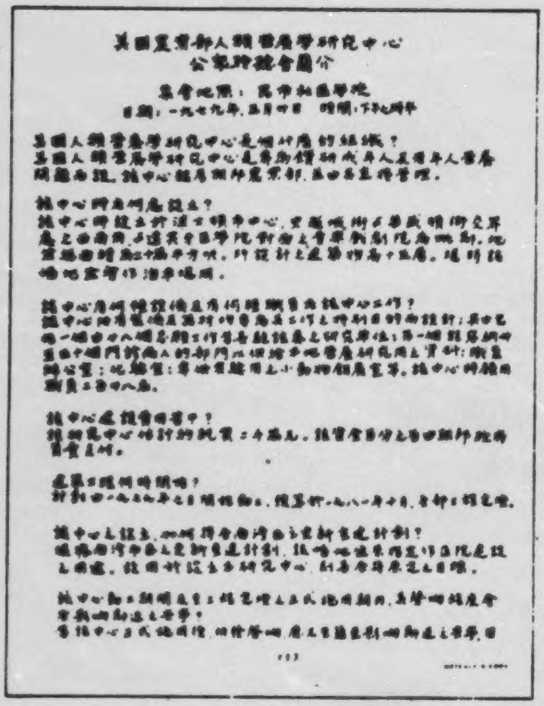
Monday, November 20, 1978
Faneuil Hall, Boston
1:30-5:30 P.M. and 7:00-10:00 P.M.

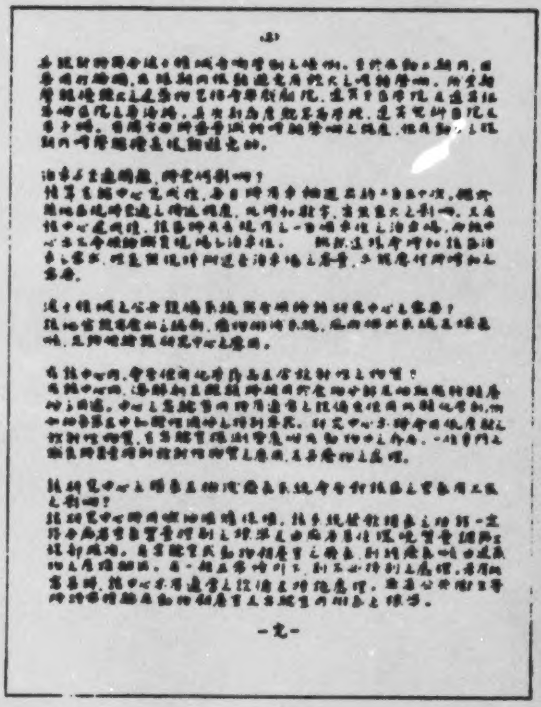
At the hearing EPA will hear your comments on its recommendations for cleaning up the Harbor and its tributaries. The EPA recommendations include:

- a $770 million water pollution control project with waste water treatment at Deer Island
- environmentally sound sludge disposal

For more information contact EPA's Office of Public Awareness at 223-7223.

Type	Things to Consider
This is an example of a public notice designed to reach a specific audience.	In many instances writing a notice that can be read and understood by the affected public means taking the extra step of writing the notice in a language other than plain English. When this extra step is taken, it is advisable not to give a literal translation of an English language notice. The notice should be actually *written* by someone with a good knowledge of the idiom and nuances of the other language. It may be advisable to seek assistance and advice from a member of the community. Of course, the principles regarding content and distribution also apply to these types of notices.





Type	Good Features	Areas Needing Improvement
This is an example of a simple, yet effective, public notice/poster.*	This notice goes right to the heart of a very specific issue: the quality of a local lake. The issue is presented in very simple terms and stresses environmental and economic concerns. The notice is direct, visually appealing and easy to read.	A telephone contact for more information should be given.

**This notice was used as a poster and it was also mailed to a carefully selected "public" living near the lake. County tax rolls and a computer list were used to identify this "public."*

Are You Concerned?

Lake Hollingsworth is Dying . . .

As a close neighbor, you will want to learn how to save your lake.

While it isn't dead yet, it is heading toward this end.

So, pay your respects to this beautiful body of water while it is still alive.

Some dedicated people are working to save it now. They are having a special meeting to tell you about it.

Come learn what is being done and how you can help. This affects your property value.

Who wants to live near a dead lake?

Sponsored by: Central Florida Regional Planning Council

Location — The Sump, Park Opposite Florida Southern College
(in case of rain: Branscomb Room 202)

Date — Saturday, February 25, 1978

Time — 10:00 A.M.

central florida regional planning council
polk, hardee, desoto, highlands & okeechobee counties

The methods that can be used to inform the publics are many. A brief statement and some helpful hints about some additional methods are included for consideration. Documents listed in the bibliography provide additional detailed material on the mechanisms frequently used to inform the public.

News Media

Newspapers, both daily and weekly, reach a large segment of the general public. In addition to public notices, feature articles on the issue being decided and reports on meetings and hearings can help to clarify concerns. Press releases are frequently sent to newspapers. Since each editor receives enough material to fill many times the space available, selection is made by information that is most interesting or important to the readers and that is well written and complete. Public participation coordinators should remain aware that newspapers work with deadlines and do not have time to sort out ideas and concepts. It is important to call a press conference, for example, only when there is something significant to report. When one communicates with the press in any way, statements must be clear and concise, with prepared background material and offers of assistance.

Newsletters

A newsletter should be an integral part of any public participation program. The quality of the printing is important but not as significant as the quality of the information. Newsletters should provide articles on any new developments regarding the issue, reports on the individuals and groups involved, controversies under discussion and most certainly any decisions that have been reached. Maps, charts, illustrations, and photographs help to inform the public and make the newsletter more effective.

Fact Sheets

While newsletters provide an ongoing information mechanism, fact sheets are designed to provide the readers with specific and detailed information about a topic. A sample fact sheet prepared by U. S. EPA's Water Planning Division* pertaining to agricultural activities and water pollution illustrates this method of informing the public.

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*Learning Resource #7: "Agricultural Activities and Water Pollution," Nonpoint Sources of Pollution Fact Sheet 5, United States Environmental Protection Agency, Water Planning Division (WH-554), Washington, DC 20460.

Agricultural Activities and Water Pollution

United States
Environmental Protection
Agency

Water Planning
Division (WH-554)
Washington, DC 20460

November 1978

Nonpoint Sources
of Pollution
Fact Sheet

5

Introduction

Crop production can cause water pollution by exposing soil to the erosive forces of water and wind. Sediment is most likely to erode into streams and lakes when crops are substituted for natural vegetation near water courses or in fragile soil areas. Fertilizers, herbicides, pesticides and fungicides, when used in excessive quantities or at times when they can move into surface or ground water, can also cause serious water pollution.

Animal waste contributes to water pollution when herds are concentrated near streams and rivers. Animals can break down stream banks, disturb stream bottoms, and destroy the vegetative cover that prevents erosion, thereby adding to the sediment load.

Severity of the Problem

Sediment is the major water pollutant from agricultural activities, contributing an estimated two billion tons to U.S. streams each year. Farming operations also add an estimated two million tons of phosporous and three million tons of nitrogen, as well as millions of pounds of chemical fungicides, insecticides, and herbicides.

Irrigation accounts for approximately 83 percent of the total national water consumption for the contiguous 48 States and represents a significant mechanism for the transport of contaminants, since the process involves leaching and removing dissolved minerals and salts from the soil.

Identifying Specific Problems

Site specific evaluations will be needed to discover the water pollution problems caused by the operation of a particular farm or ranch and to establish the appropriate practices to correct the problem.

Information needed will include:

- Climate, including precipitation volume, intensity, and seasonality;
- Land characteristics;
- Susceptibility of soil to erosion;
- Proximity of ground and surface water to crop production;
- Cropping methods;
- Management of fertilizers, pesticides, herbicides;
- Location and management of feedlots, etc.

Best Management Practices

Identifying Best Management Practices (BMP's) is one of the most important tasks in 208 planning. BMP's are the techniques that will used to control pollution from nonpoint sources. EPA defines Best Management Practices as:

A practice or set of practices that is determined by a designated planning agency after problem assessment, examination of alternative practices, and appropriate public participation to be the most effective and practicable (including technological, economic, and institutional considerations) means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals.

Best Management Practices for agricultural activities include structures to trap sediment and other pollutants before they run into surface waters and nonstructural measures to prevent erosion and manage the use of pesticides and fertilizers.

Structural BMP's

Structural solutions include:

- Barriers;
- Catchment systems;
- Diversions;
- Storage basins for controlling runoff, irrigation water, and animal wastes.

Nonstructural BMP's

Nonstructural measures include:

- Minimizing soil disturbances and open fallow (letting fields lie bare) through specific cultivation practices such as chisel plowing, stubble mulching, notill conservation methods, strip or contour cropping, and field terracing.
- Planting grass in waterways to minimize erosion and filter pollutants from draining waters.
- Fencing to keep animals away from water courses and prevent overgrazing.
- Maintaining permanent plant cover on fragile soil areas.
- Carefully managing the amounts and application schedules of chemicals and fertilizers.

USDA SOIL CONSERVATION SERVICE

BMP's are needed to Control Runoff from Feedlots because Water Leaving these areas is high in Nutrients, Organics, Pathogens, and Toxics.

Windbreaks Are One BMP Which Can Prevent Pollution From Agriculture

- Maintaining buffer strips between field borders and stream banks. Preserving swamps and wetlands along watercourses to filter pollutants before they enter the water.
- Bisecting fields with windbreaks to retard wind erosion.
- Cooperating with local conservation districts in the preparation of a soil survey and using the Universal Soil Loss Equation to determine soil loss and needed BMP's.
- Practicing integrated pest management to reduce the amount of pesticide used.

Nonstructural BMP's for Irrigated Land

- Use of minimum amount of water for satisfactory yields.
- Use of precipitation forecasts to better utilize rainfall and snow melt in irrigation.
- Application of no more fertilizer than needed to nourish crops.
- Practice integrated pest management to reduce the amount of pesticide use.
- Proper management of irrigation water.

Structural BMP's for Irrigated Land

- Use of sedimentation basins.
- Use of one field's irrigation runoff (tail water) on another field or on the same field again.
- Use of sprinkler and drip systems to reduce water needs, lower runoff volumes, and prevent water losses from other distribution and conveyance systems.

Regulatory Program

A sound approach for a regulatory program may be a State erosion and sediment control law which includes agriculture. Some local conservation districts have the authority to regulate erosion and sediment through permit programs and land use controls. Some States have also taken measures to control agricultural chemicals which can pollute water.

Large animal feedlots of 1,000 head or more are now covered by the National Pollutant Discharge Elimination System point source permit program.

Rural Clean Water Program

The Rural Clean Water Programs (P.L. 95-217) of December, 1977, specifically authorizes the Department of Agriculture to sign contracts with landusers in selected high priority areas. Under these contracts, the landuser will receive special technical assistance and costsharing to improve water quality by reducing sediment and other agricultural pollution. High priority areas for assistance will be identified in 208 plans. Regulations for this program have been proposed.

Programs to control agricultural nonpoint source pollution may be enforced at the local level, but the States should have the authority to step in, initiate complaints, and prosecute offenders, if local enforcement is not effective.

At the State level the appropriate agency may be either the State Department of Water Resources, the Department of Agriculture, or the Department of Environmental Protection. The local agency may be a county government or the local conservation district. Agreements between the local government units and the State may be necessary in certain States to assure that the respective duties of each agency are carried out.

Citizen Action

1. If agriculture is important in your area, urge your State Water Quality Management Planning Agency to establish it as a priority problem.

2. Urge your State agency to form a committee that includes farmers, ranchers, and interested citizens to determine appropriate Best Mangement Practices for the area.

3. Ask your State agency whether it has developed a list of techniques which are applicable as Best Management Practices to safeguard water quality in the State.

A slide presentation and accompanying cassette on agricultural pollution and BMP's can be obtained from the Public Participation Coordinator in each EPA Regional Office.

National Wildlife Federation

This publication was made possible a grant (No. T900 633) from the Water Planning Division, U.S. Environmental Protection Agency to the National Wildlife Federation. It was revised by Ned Sullivan, NWF staff assistant, from a handbook produced by Lee Daneker when he was Director of National Wildlife Federation 208 Public Participation Project.

Other information dissemination methods to be considered include:

Information depositories: Federal and state laws require that a central information file or depository be maintained for certain projects in a building open at times that facilitate community use, such as a library. Additionally, there should be a copying machine on the premises and, for more complex projects, staff support to assist citizens in locating information. The larger the community, the more locations to serve the public should be arranged.

Speeches: Public participation coordinators and those directly involved with the project can inform the community by preparing speeches and visual presentations. Service clubs, civic groups, churches, chambers of commerce, educational institutions, and other organizations within the community will schedule speakers on a regular basis.

Field trips and Exhibits: An organized visit to the site of a potential facility, or a similar facility, or a tour by bus or boat can impact the public in several ways. It may encourage participation, raise questions, and resolve concerns. Additionally, it provides an opportunity to involve the media, resulting in additional information being presented to citizens.

Exhibits are visual displays which may be as simple as maps, charts, and diagrams or walk-through structures which allow viewers to make selections and interact.

Section 5:

Consultation Methods

CONSULTATION METHODS

The general term "consultation" describes the formal and informal methods used to seek advice and exchange views on a topic of mutual concern. Consultation is pivotal to the intent and purpose of public participation. Most citizen involvement activities, therefore, should reflect a sincere effort to seek advice from, exchange views with, and respond to appropriate segments of the community. A measure of how successfully citizen involvement programs are conducted is the level of consultation that takes place and the quality of response.

Consultation techniques range from small group discussions to formal public hearings. Careful selection of an appropriate method is essential. The organizers of a public participation program should determine the audience that is to be reached, the type of information that is needed, anticipated questions, and potential problems. A selected method should assist in identifying issues, concerns, problems, and values, and provide adequate information to enable a decision to be made regarding the topic.

A listing of consultation techniques follows. They are a representative sample of the diversity of methods available. Using any one method or combination will depend on the objectives of specific program goals. Some can be implemented with limited planning, while others require specialized training to be properly conducted.

The Water and Power Resources Service's Public Involvement Manual: Involving the Public in Water and Power Resources Decisions* addresses the sample of consultation issues and offers alternative methods for consideration by public participation coordinators. The following information regarding consultation methods is excerpted from this document.

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*Learning Resource #8: James L. Creighton, Public Involvement Manual: Involving the Public in Water and Power Resources Decisions. U.S. Water and Power Resources Service.

KNOW THE PURPOSE OF YOUR MEETING

The single most important thing to consider in designing a meeting is what you want to accomplish by holding the meeting. The design of the meeting must always reflect the purpose, or function, of the meeting.

The first step in knowing the purpose of a meeting is to see how it fits in the overall logic of your public involvement plan. If you have followed the guidelines outlined earlier in this manual you will have selected a meeting as a public involvement technique based on an analysis of the Information Exchange--the information you need to get to and from the public, and the publics you hope to reach. By going back to this Information Exchange you can identify what you want to accomplish in your meeting and design a meeting format appropriate to that purpose. Is the purpose of the meeting primarily to inform the public about a project or proposed action, or is it to gather information, or both? The kind of meeting you select should reflect these different purposes.

In general, meetings serve five basic purposes, or functions. These are:

1. INFORMATION-GIVING

   In this function the agency is communicating information to the public. This information could include the nature of the proposed decision, the issues which have been identified by the agency, the available alternatives, or the plan selected by the agency. The agency possesses the information and must communicate it in some manner to the public.

2. INFORMATION-RECEIVING

   In this case the public possesses the information, which could include public perceptions of needs, problems, values, impacts, or reactions to alternatives. This function stresses the need of the agency to acquire information held by the public.

3. INTERACTION

   While interaction clearly involves both information-giving and information-receiving, it also serves the additional purpose of allowing people to test their ideas on the agency or other publics and possibly come to modify their viewpoint as a result of the interaction. With this function it is not the initial information given or received which is critical as much as the process of testing, validating, and changing one's ideas as a result of interaction with other people.

4. CONSENSUS-FORMING/NEGOTIATION

   A step beyond interaction is to begin to move toward common agreements. Interaction alone may not assure any form of agreement, but in consensus-forming/negotiation the interaction is directed toward agreement on a single plan by all of the critical publics.

5. SUMMARIZING

This is the need at the end of a long process to publicly acknowledge the agreements that have been reached and reiterate the positions of the different groups toward these agreements. This function is required both to give visibility to the entire decision-making process which has taken place, and also to form a kind of closure now that the process is ending.

Each of these functions in turn establishes limitations on the kind of meeting format that is possible if the function is to be served. A few of these limitations and implications are shown below:

1. Information Giving: In information giving the information must flow from the agency to all the various publics, so it is appropriate to have a meeting format which primarily allows for presentations from the agency, with questions from the audience. This means that the classic meeting, with one person at the front of the room making a presentation to an audience in rows, may be a suitable format for this function.

2. Information Receiving: When the function is reversed and the need is to obtain information from the public, then having one person stand at the front of the room addressing an entire audience is an extremely inefficient and uneconomical means of obtaining information. Many more comments could be received from the public, for example, if the audience were broken into small groups and comments were recorded on flipcharts or on 3 X 5 cards.

3. Interaction: Interaction, by its very nature, usually requires that an audience be broken down into groups small enough so that there is time and opportunity for individuals to exchange information and ideas and discuss them all thoroughly. Large public meetings typically provide nothing more than minimal opportunities for interaction. As a result the large group/small group, workshop, or coffee klatch formats are more suitable.

4. Consensus-Forming/Negotiation: Like interaction, consensus-forming/negotiation also requires intense interaction and usually must be accomplished in some form of small group. In addition, the requirement for consensus formation usually means that some procedure is utilized which assists the group in working toward a single agreed-upon plan rather than allowing simply for an open discussion with no specific product. Some relatively structured format, such as a workshop or charrette, is more suitable for this function.

5. Summarizing: Since the function of summarizing is to provide visibility to the entire process which has taken place, it may again be suitable to use large public meetings as the means to serve the summarizing function. In this way individuals and groups can be seen taking positions and describing their involvement in the decision-making process which has preceded this meeting.

KNOW YOUR AUDIENCE

The other major factor in selecting a meeting format is the audience you anticipate. There are several audience factors that are important:

1. Audience Size: Small-group techniques such as workshops, kitchen meetings, etc. obviously only work when you have a small group. It is possible to maintain some of the interaction of small-group approaches by breaking a large group into smaller discussion groups for a portion of the meeting. This requires careful logistical planning, however, to ensure that the facility allows this, sufficient tables and chairs are set up for the discussion group, procedures are established for getting reports back from the discussion groups, etc. If audience size requires a large-group format, many people in the audience will not speak out because they are intimidated speaking to a large audience. However, many "silent" attendees will participate with written comments if 3 X 5 cards or response forms are provided to everyone, and comments encouraged.

2. Intensity of Interest in the Issue: If people are highly interested in a topic they are more willing to participate in workshops or other meeting formats that encourage active participation of all in attendance. If the topic is of lower interest, then more passive formats may be appropriate. If, however, feelings about an issue sharply divide a community, and there is a potential for unpleasant interaction, then audiences often prefer the formality of a large meeting to the risks of personal confrontation.

3. Familiarity and Comfort with Alternative Meeting Formats: The audience's familiarity with workshops or other alternative meeting formats may also influence your format selection. If leaders of the various interests have participated in successful workshops before, then they may be entirely comfortable with this format. If small-group techniques are new and different to a community, then somewhat greater care should be exercised in evaluating its appropriateness for this situation.

   If your audience will consist largely of elected officials or dignitaries then you may need to be more cautious in straying from orthodox meeting formats. The risk exists that they may feel it is "beneath their dignity" to participate in any new format.

4. Credibility of the Agency: Be aware that any time you utilize a meeting format that is substantially different from those familiar in the community, your credibility is on the line until it is demonstrated that this new format will be productive. In locations where the Water and Power Resources Service has substantial credibility, this may present little problem. In situations where the Reclamation's credibility is already low, there may be resistance to using anything other than traditional formats, even though you are sure in your own mind that they would produce a better meeting.

   In particular, when the audience is substantially antagonistic to the proposed action or WPRS, they may see efforts to break them into small groups as a "divide and conquer" tactic.

   A checklist that can help to ensure that the many required details are completed follows.

PUBLIC MEETING CHECKLIST

1. Meeting Purpose: ______________________________
2. Meeting Type: ________ Formal ________ Informal
3. Meeting Format: ______________________________
4. Meeting Budget: ________ Prepared ________ Approved
5. Advisory Committee Approval?
6. Identifying Potential Participants

   Interests identified and categorized? ______

   Organizations and individuals identified? ______

7. Meeting Time: __________ Date __________ Hours __________
8. Meeting Place(s): ______________________________

   ____

   Central location? ______
   Public Transportation access? ______
   Suitable parking? ______
   Safe area? ______
   Adequate facilities? ______

   Rental fee? ______ No ______ Yes $ ______

   Does the rental fee include

      Lecterns? ______
      Speaker sound system? ______
      Blackboards or easels? ______
      Projectors? ______
      Tape recorders? ______
      Chairs? ______
      Tables? ______
      Meeting room set-up? ______
      Meeting room clean-up? ______

9. Meeting Space

   Total number of people expected: ________________

   General session

      Seating arrangement type: ________________

      Adequate space? ________________

   Discussion session

      Number of small groups: ________________

      Seating arrangement type: ________________

      Number of people in each group: ____________

      Adequate space? ________________

PUBLIC MEETING CHECKLIST

10. Meeting Sponsorship
    Agency? ______
    Other Organization? ______
    Who? ______________________________
    Accepted? ______

11. Leader Selection
    Who? ______________________________
    Accepted? ______

12. Speaker Selection
    Identified? ______
    Speakers invited? ______
    Speakers have accepted? ______

13. Moderator Selection
    How many needed? ______________________________
    Identified?
    Moderators invited? ______
    Moderators have accepted ______

14. Agenda Development
    Questions developed? ______
    Schedule developed? ______

15. Background Information Development
    Information to be provided: ______________________________
    ____
    Graphics identified? ______
    Graphics ordered? ______
    Graphics received? ______
    Written information completed? ______
    Distribution Methods: ______________________________
    ____
    Number of copies: ______________________________
    Copies reproduced? ______
    Copies distributed? ______
    Graphics to be used in oral presentations? ___Yes ___No
    Graphics identified? ______
    Graphics ordered? ______
    Display equipment ordered? ______
    Graphics received? ______
    Graphics to be used in discussion groups? ___Yes ___No
    Graphics identified? ______
    How many copies? ______________________________
    Graphics ordered? ______
    Graphics received? ______

PUBLIC MEETING CHECKLIST

16. Publicity

Methods selected: ______________________________
____
Preparation ordered? ____
Material prepared? ____
Number of copies needed: ______________________
Material placed and/or distributed? ____
Personal follow-up completed? ____

17. Meeting Arrangements

For the general session
- Lecterns, chairs, tables obtained? ____
- Speaker system obtained? ____
- Projectors/screens obtained? ____
- Space for wall displays? ____
- Registration table/space? ____
- Personnel for registration? ____
- Refreshments (and personnel)? ____
- Name tags obtained? ____
- Room arrangements made? ____
- Audio/visual equipment set up? ____
- Audio/visual equipment tested? ____
- Ventilation/heating adequate? ____

For discussion sessions
- Number of easels/blackboards: ______________
- Easels/blackboards obtained? ____
- Easels/blackboards delivered? ____
- Newsprint for easels obtained? ____
- Supplies (pencils/paper/chalk erasers/felt tip pens/masking tape/thumb tacks) obtained? ____
- Room arrangements made? ____
- Ventilation/heating adequate? ____

Luncheon arrangements for conference? ____Yes ____No
Meeting Clean-up
- Facilities restored & cleaned? ____
- Equipment returned? ____

18. Recording the Proceedings

Methods to be used: ______________________________
____
Personnel/equipment obtained? ____

19. Orienting Discussion Moderators

Orientation meeting scheduled? ____
Orientation meeting held? ____
Moderators have prepared materials? ____
Final moderator meeting? ____

PUBLIC MEETING CHECKLIST

20. Reporting to the Decision-making Body

The body(s): ____

____

____

Reporting format: ________________________________

Report made? ______

21. Reporting to the Public

Formats used: ____

____

____

Report prepared? ______
Number of copies required: ______________________
Copies reproduced? ______
Reporting completed? ______

22. Meeting Evaluation

____

____

____

Evaluation completed? ______
Recommendations made? ______
Recommendations accepted? ______

Section 6:

Educating the Public

EDUCATING THE PUBLIC

Most public participation activity revolves around a project requiring citizen involvement prior to approval or funding. Frequently it is imperative that the public have substantial understanding of technical scientific, regulatory, and economic information to adequately make a decision. The lack of knowledge about complicated matters seems to be a continuing problem hindering decision-making and often creating confusion. It should not be expected that the public inherently has the necessary information to make good technical and scientific judgements. Therefore, it is necessary for the organizers of participation activities to present information in a nontechnical manner, enabling the layman to understand project goals and alternatives available to reach those goals.

Often, we individually assume languages to communicate subjects that can best be understood by others within our fields of interest. This enables us to more concisely communicate with others with similar interests. However, most citizens do not understand the language of the engineer, regional planner, or government official. Therefore, that language must be translated into easy-to-understand logical concepts.

One effort that attempts to convey technical information for understanding by nontechnical members of a water quality management advisory group is offered as an example. Developed by Pennsylvania State University, it is organized to be completed within a 1 to 1-1/4 hour session. It is generally agreed that citizens will not concentrate and commit time to learn a complex subject unless there is personal motivation. It is recommended that readers review the pages of both the Instructor Guide[*] and the Citizen Handbook[**] on land treatment which are included in this monograph. As you will note, the Instructor Guide is designed to enable someone not familiar with the topic to learn about and present an organized program to citizens. In the first part, the objectives of the session are stated. This gives the presentor a clear and concise mandate. Following are materials required to conduct the session, as well as suggested readings. Since individuals learn by different methods and rates, several alternatives are used, including an audio-visual presentation, reading material, and guided discussions. The evaluation checklist provides the individual presenting the session and citizens with an overview of the significant concepts about the subject of land treatment. Finally, the Instructor Guide provides a script of the slide presentation. This enables the presentor to read the script or use the audio cassette, depending on preference or availability.

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[*] Learning Resource #9: "Land Treatment - Instructor Guide," Working for Clean Water, EPA Information Dissemination Project, 1200 Chambers Road, Room 310, Columbus, OH 43212.

[**] Learning Resource #10: "Land Treatment - Citizen Handbook," Working for Clean Water, EPA Information Dissemination Project, 1200 Chambers Road, Room 310, Columbus, OH 43212.

The Citizen Handbook defines land treatment and related policy issues. It then presents engineering, economic, and political considerations. One of the most useful techniques used is the case study. Case studies show citizens that particular methods have been implemented, and similar characteristics to the community where the presentation is being made should be selected. Finally, the handbook offers a glossary of terms and additional resources. By reading the materials in the Citizen Handbook, you may determine if you could make a decision about land application with the knowledge included. It will be a useful exercise to consider how you would adopt the presentation.

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Working for Clean Water

An Information Program for Advisory committees

Land Treatment

Instructor Guide

Land Treatment

Land treatment of municipal wastwater must be considered as an alternative treatment method under facilities planning. Land treatment puts wastewater to work to grow crops and get more mileage from water and energy resources while reducing pollution. Communities finding land treatment to be feasible and cost-effective can get 85 percent federal funding for their projects, including the purchase or leasing of land. Conventional wastewater treatment facilities are eligible for only 75 percent federal funding.

Upon completion of this presentation, the participant should be able to:

- Assist in planning efforts to assure land treatment is considered fairly
- Help to identify potential land treatment sites
- Help to identify community attitudes towards acceptance of land treatment
- Understand the relative cost-effectiveness of land treatment
- Understand the role of land treatment in solving today's water pollution problems
- Recognize the relative advantages of land treatment as compared to conventional wastewater treatment
- Define land application methods and recognize their potential use.

Required Materials

☐ Set of slides plus cassette tape for the audiovisual presentation, "Land Treatment of Municipal Wastewater, A New Look at an Old Idea"

☐ Slide projector, screen, and related equipment

☐ Set of flip charts plus easel or set of transparencies and overhead projector for guided discussion

Continued on next page

☐ Good, clear topographical map of the local area

☐ Copy of handbook, "Land Treatment," for each participant

☐ Copy of "Evaluation Checklist for Land Treatment Alternatives," for each participant. (A copy can be found in the Appendix.)

Important Notes

1. Before this presentation the instructor should:

    a. Prepare introductory comments using A History of Land Application as a Treatment Alternative.

    b. Review the Evaluation Checklist for Land Treatment Alternatives for use in the guided discussion. The checklist highlights various considerations that must be evaluated for land application of wastewater. Some of the items in the checklist may be deleted depending on the local situation.

2. Group discussion of the items in the Evaluation Checklist will have to be tightly controlled if the time schedule is to be followed. Items of local interest should be emphasized.

3. Discussion of case studies may be included if time permits. Also a case study could be developed to use as a guide for discussing the items in the Evaluation Checklist.

Suggested Activities

Introductory Comments	5 minutes
A/V Presentation	20 minutes
Guided Discussion	25-35 minutes
Closing Questions and Answers	10 minutes
TOTAL TIME	60-70 minutes

Introductory Comments (5 minutes)

1. Land treatment represents the most nearly perfect answer to water pollution control problems because it emphasizes recycle and utilization of the effluent.

2. Land treatment is not "new technology" but in fact predates other wastewater treatment technology.

Use data from A History of Land Application as a Treatment Alternative to illustrate this point.

3. Go over the key questions. Ask the participants if they have other questions they wish to add concerning land treatment.

A/V Presentation (20 minutes)

1. Show the slide/tape program "Land Treatment of Municipal Wastewater, A New Look at an Old Idea." It provides excellent coverage of the topic including some case history information.

A/V script is in the Appendix in case of equipment failure.

2. Advise the participants to jot down any comments or questions for later discussion.

3. Answer any questions and discuss any comments the participants may have from the slide/tape program.

Guided Discussion (25-35 minutes)

1. Hand out copies of the Evaluation Checklist.

Briefly go over the scope and objectives of the local project.

This is Part A of the checklist. Use a map of the area to define the local project boundaries and problems.

This is Part B.

2. State the local wastewater characteristics with respect to the existing treatment and effluent disposal facilities.

This is Part C.

3. Review site selection factors. Solicit lots of input from the advisory group members, since they should be experts on the local climate, topography, soil type, etc.

Use topographical map of local area.

4. Evaluate potential sites in the project area.

This is Part D of the checklist.

5. Consider appropriate methods of land application based on the project objectives and characteristics of the selected potential sites.

This is Part E.

6. Discuss the impact on the environment, including public health, social, and economic aspects, for each land treatment alternative.

This is Part F.

7. Consider various ways to implement the project.

Discuss the role of the advisory group in project implementation.

Closing Questions and Answers (10 minutes)

1. Use the key questions in the handbook to promote discussion. Use this time to evaluate the participants' understanding of the material.

2. Local area considerations should be reinforced during this discussion.

3. If possible, have a state or local regulatory agency official present to help with questions regarding the local area.

EVALUATION CHECKLIST FOR LAND TREATMENT ALTERNATIVES

A. Project Objectives

Consider the objectives and goals relevant to water quality protection or groundwater aquifer, the need for increasing existing water resources, and any other desired effects. ☐

B. Evaluation of Wastewater Characteristics

1. Existing treatment (description, adequacy for intended project) ☐

2. Existing effluent disposal facilities (description, consideration of water rights) ☐

C. Evaluation of Potential Sites

1. General description

a. Location (distance from collection area or treatment plant, elevation relative to collection area) ☐

b. Compatibility with overall land-use plan (current use, proposed future use, zoning and adjacent land use, proximity to current and planned developed areas, is there room for future expansion) ☐

c. Proximity to surface water ☐

d. Number and size of available land parcels ☐

2. Environmental characteristics

a. Climate (precipitation analysis and seasonal distribution, storm intensities, temperature with seasonal variations, evapotranspiration, wind velocities and direction) ☐

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b. Topography (ground slope, description of adjacent land, erosion potential, flood potential, extent of clearing and field preparation necessary) ☐

c. Soil characteristics (type and description, infiltration and percolation potential, soil profile, evaluation by soil specialists) ☐

d. Geologic formations (type, evaluation by geologist, depth of formations, earthquake potential) ☐

e. Groundwater (depth to groundwater, groundwater flow, depth and extent of any perched water, quality compared to requirements, current and planned use, location of existing onsite and adjacent wells) ☐

f. Receiving water (type, current use, existing quality, water rights) ☐

3. Methods of land acquisition or control (purchase, lease, purchase and lease back to farmer, contract with users) ☐

D. Consideration of Land Application Alternatives

1. Irrigation

a. Purpose (increase crop yields, maximize effluent application, irrigate landscape) ☐

b. Application techniques (spraying, ridge and furrow, flooding) ☐

2. Infiltration-percolation

a. Purpose (groundwater recharge, pumped withdrawal or underdrains, interception by surface water) ☐

b. Application techniques (spreading, spraying) ☐

3. Overland flow (spray-runoff)

a. Purpose (discharge to surface waters, reuse of collected runoffs) ☐

b. Application techniques (spraying, flooding) ☐

4. Combinations of treatment techniques (combinations of land application techniques at the same or different sites, combinations of land application with in-plant treatment and receiving water discharge) ☐

5. Compatibility with site characteristics ☐

E. Environmental Assessment

1. Environmental impact

a. On soil and vegetation ☐

b. On groundwater (quality, levels, flow direction) ☐

c. On surface water (quality, flow) ☐

d. On animal and insect life ☐

e. On air quality ☐

f. On local climate ☐

2. Public health effects (groundwater quality, insects and rodents, runoff from site, aerosols, contamination of crops) ☐

3. Social impact (relocation of residents, effects on greenbelts, open space, recreational activities, community growth) ☐

4. Economic impact (on overall local economy, tax considerations on land, conservation of resources and energy) ☐

F. Implementation Program

1. Public information program

   a. Approaches to public presentation (local officials, public hearings, mass media, local residents and land owners, communication with special-interest groups) ☐

   b. Public opinion (engineer's response, review of problem areas) ☐

2. Legal considerations ☐

3. Reevaluation of ability to implement project ☐

4. Implementation schedule (construction schedule, long-range management plan) ☐

LAND TREATMENT OF MUNICIPAL WASTEWATER

A New Look At An Old Idea

	Slide Description	Narrative
1.	EPA Logo	EPA Logo
2.	Words: Land Treatment of Municipal Wastewater A New Look At An Old Idea	Land Treatment of Municipal Wastewater* A New Look at An Old Idea
3.	Picture: Fresco of Greek farmer	Wastewater was applied to the land in ancient Greece.
4.	Picture: German farmland	Germans have used it to irrigate their farms since the 16th century.
5.	Picture: Farmland being spray irrigated	It's use spread to the United States in the late 19th century with the first projects being developed for irrigation purposes.
6.	Picture: Farmlands	Groundwater recharge using wastewater effluent was started early in the 20th century in semi-arid regions of the southwest.
7.	Picture: Traveling boom spray irrigation	Today this old idea for using wastewater is getting a new look.
8.	Picture: Center pivot spray boom	Land treatment of wastewaters from community ---
9.	Picture: Land treatment of industrial waste	and industrial sources is practiced successfully and extensively in the United States and in countries throughout the world.
10.	Picture: Overland flow	With a rising awareness of worldwide shortages of food, water and energy, people are coming to think of wastewater as what it really is -- a resource -- something to be recycled and re-used even while being cleansed.
11.	Picture: Wastewater irrigation of crops	Land application is putting wastewater to work to grow crops and get more mileage from water and energy resources while reducing pollution.

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*Produced for the EPA Region VI by TEC Films, Inc. Modified by Penn State University.

12.	Picture:	Containment pond	It captures wastewater nutrients as fertilizer, minimizes surface stream pollution, restores groundwater supplies, and uses less energy than required by conventional treatment systems.
13.	Drawing:	Water percolation through soil	By simple definition, land application means putting wastewater onto the land rather than discharging it into surface streams.
14.	Picture:	Wastewater settling basins	Usually the process involves pre-application treatment —
15.	Picture:	Irrigation by overland flow	followed by application of the wastewater to land areas selected for their capacity to cleanse the water and filter out remaining nutrients.
16.	Picture:	Control panel of a wastewater treatment plant	Thus land application of wastewater becomes an alternative method of treatment to meet water quality standards without going to the full and usually more expensive route of conventional wastewater treatment.
17.	Words:	The Clean Water Act showing changes made by the 1977 amendments	The Clean Water Act of 1977 requires communities seeking federal funds for wastewater treatment systems to consider land application as an alternative treatment method.
18.	Drawing:	Federal funding differences between conventional and land treatment	Communities finding it feasible and cost-effective can get 85 percent funding for their projects including purchase or lease of land, compared to 75 percent for conventional treatment.
19.	Picture:	Meeting of local government	Land application requires careful planning, thorough cost evaluation, effective operation, and routine monitoring.
20.	Picture:	Pretreatment of wastewater	Land treatment achieves water quality goals with simple and low-cost pre-application treatment of the wastewater.
21.	Words:	"We must press vigorously for this method of reclaiming and recycling municipal wastewater"	In a major policy statement, the U.S. Environmental Protection Agency said: "We must press vigorously for this method of reclaiming and recycling municipal wastewater."

22.	Picture:	Wastewater discharging into a stream	Rigorous standards discouraging the discharge of wastewater into waterways have contributed to the current interest in land application.
23.	Picture:	Treatment plant	Land treatment policy stems from three major elements. Much wastewater today requires the removal of nutrients to protect surface streams.
24.	Picture:	Fertilizer machinery	Fertilizer shortages, as well as costs, accent the need for recovery of these nutrients from wastewater.
25.	Picture:	Farmer examining crops	Operating systems and research studies prove the capacity of soils and plants to purify waters and reuse the nutrients from wastewater.
26.	Drawing:	Region 6 and 7 map	In the nine states comprising EPA Regions 6 and 7, there are more than 300 land application systems with many more in prospect. The bi-regional area embraces a giant portion of middle America -- Arkansas, Louisiana, New Mexico, Oklahoma and Texas in Region 6; Missouri, Kansas, Iowa and Nebraska in Region 7.
27.	Drawing:	Map of U.S.	In the United States-at-large, there are more than 700 land treatment systems at present with more coming on line.
28.	Words:	Irrigation, Infiltration, Overland Flow	Land application techniques or methods may be grouped into three categories: Irrigation Rapid Infiltration and Overland Flow
29.	Drawing:	Irrigation illustration	Irrigation is application of wastewater to the land by surface or spray to grow crops. It is the most common land treatment technique.
30.	Picture:	Spray irrigation	This picture shows irrigation by spray.
31.	Drawing:	Infiltration illustration	Rapid Infiltration is an approach by which large volumes of wastewater are applied to the land, infiltrate the soil surface, percolate through the soil pores, and recharge the groundwater.
32.	Picture:	Infiltration basin	The method is shown in this rapid infiltration basin.

33. Drawing: Overland flow illustration	Overland Flow is a treatment method by which wastewater is applied to grassy slopes and allowed to run off through the vegetation.
34. Picture: Spray application	It may involve spray or surface application.
35. Picture: Surface application	Each of these treatment methods has its advantages and limitations, depending upon its application to a given situation.
36. Words: Land availability, climate, soil types, topography, geology, and groundwater characteristics	Factors which influence selection of a land treatment system include land availability, climate, soil types, topography, geology, and groundwater characteristics.
37. Picture: Conventional treatment for urban areas	Because land treatment involves land and land involves cost, land application systems may be too expensive for some communities, especially acreage near a large city.
38. Drawing: Buffer zone illustration	High land costs favor conventional treatment systems, especially where large buffer areas are required around the application areas.
39. Picture: Farmland	However, land treatment sites are not limited to municipal ownership. Sometimes the public agency and the farmer have combined resources to create a system.
40. Picture: Holding pond	It is not necessary for communities using land treatment systems to own and operate farms. A city may supply the pre-treated wastewater to a holding pond. Through agreements with the city, farmers then can withdraw the water and apply it to their farms.
41. Picture: Monitoring tests	The city must maintain sufficient operational and monitoring control to make sure the control objectives are met. Beyond that, however, the enterprising farmer with suitable land is indeed in a good negotiating position to have his land irrigated out of the city's waste treatment budget with a profit bonus from the water and nutrients.

42. Picture: Two holding ponds	The city of Abilene, Texas owns about 2200 acres of farmland and leases about 1,500 acres to a single farmer who irrigates crops with wastewater from the city's secondary treatment facility.
43. Picture: Cropland	In addition, six other farmers in the area use the effluent to irrigate about 1800 acres of cropland, mostly maize and cotton. About half of the city's treated wastewater is discharged to surface streams.
44. Picture: Pipeline in cornfield	The system is working well with mutual benefits to the city and the farming community, says Dwayne Hargesheimer, Director of Water Utilities.
45. Words: "Land application facilities reflect a general improvement of the environment rather than impairment.	The American Public Works Association concluded from a survey of some 100 operating systems that "land application facilities reflect a general improvement of the environment rather than impairment." The same survey concluded that land application systems revealed no specific health hazards.
46. Picture: Water testing kit	On the basis of all available knowledge, health hazards from land application of wastewater are minimal, although continuing monitoring and research are essential.
47. Picture: Cropland	During the dry summer of 1972, farmer L. E. Kohl began pumping wastewater from the City of Vandalia, Missouri, and using it to irrigate his crops. That year his corn out-produced his dry-land corn by 65 bushels per acre.
48. Picture: Irrigation pump	In 1974 Kohl was irrigating 240 acres of corn which yielded 122 bushels per acre. The Vandalia lagoon system was not large enough to hold the water he needed, so last year he built a larger reservoir to hold wastewater which previously had been discharged into surface streams during the fall and winter.
49. Picture: Wheat field	Today, with added capacity of the lagoon system, Kohl says his farm raises about 400 acres of corn, 100 acres of wheat, and 500 acres of soybean per year, and feeds 1800 head of hogs.

50.	Picture:	Holding pond	Kohl's land application project has been monitored routinely for health hazards, with no adverse effects. There has been no appreciable buildup of chemicals or metals, and no undesirable odors.
51.	Picture:	Long shot farmland	Roswell, New Mexico -- a city of 45,000 -- has been operating a land application system since 1944. It provides wastewater used by nine farmers who irrigate between 700 and 1,000 acres of corn, alfalfa and cotton.
52.	Picture:	Pipe discharging into storage reservoir	This picture shows the storage reservoir with irrigated fields in the background.
53.	Picture:	Irrigation ditch	The ditch carries effluent from the storage reservoir to the fields.
54.	Picture:	Land treatment in small community	The small farming community of Humphrey, Nebraska, discharges about 100,000 gallons of wastewater effluent per day to a storage lagoon.
55.	Picture:	Spray application	There it is delivered to farmer Melvin Bender, who irrigates 100 acres of corn and soybeans -- applying about 13 inches of water annually through a center pivot spray system.
56.	Picture:	Medium shot spray application	The arrangement has proved mutually beneficial to both the town and the farmer, producing between 100 and 125 bushels of corn per acre as compared to about 50 bushels per acre produced on non-irrigated land in the same area.
57.	Picture:	Fertilizer containers	The removal of nitrogen and phosphorus by conventional treatment methods requires chemicals as well as energy and drives the cost of the treatment upward.
58.	Picture:	Medium shot of bales in field	Land treatment not only conserves this energy, but it puts the nutrients to work for higher crop yields with savings in fertilizer costs.
59.	Drawing:	Energy use bar graph	Studies show it takes much more energy for a conventional wastewater plant to produce the same quality of reclaimed water yielded by the land application process.

60.	Picture:	Spray irrigation site with rotating boom	Since 1975 Muskegon County, Michigan has been using land application of wastewater stored in aerated lagoons.
61.	Picture:	Field of corn	The system operating from April to November in 1975 treated 27 million gallons per day on 5400 acres of land.
62.	Picture:	Piles of bagged fertilizer	The reuse of nitrogen, phosphorus and potassium from the corn irrigation in 1975 amounted to $110,000 in fertilizer value.
63.	Words:	800,000 tons nitrogen, 700,000 tons phosphorus, 4,700 tons potassium	It has been estimated that the domestic waste effluent discharged to surface streams on a national scale contains 800,000 tons of nitrogen, 700,000 tons of phosphorous, and 4,700 tons of potassium per year. This is about 10 to 15 percent of the national fertilizer consumption of these valuable nutrients.
64.	Picture:	Close shot corn cob	As an alternative means of wastewater treatment and disposal, land application has been found too successful and too economical to ignore without careful consideration.
65.	Picture:	Golf course	Disease germs exist -- both in land treatment and conventional treatment -- but there has been no evidence of disease outbreaks or high health risks, even though wastewater is sometimes applied to golf courses and public parks as well as cropland.
66.	Picture:	Small town	Making land treatment systems safe is just like making any community service safe -- buildings, airplanes, trains, highways, utilities, and the like. You have to follow the rules which may vary from project to project.
67.	Picture:	Irrigation field with cows in background	Land treatment involves the use of plants and the soil to remove contaminants from wastewaters. It is capable of achieving removal levels that compare to the best available wastewater treatment technologies.

68. Drawing: Groundwater recharge illustration	Wastewater utilization through irrigation provides excellent pollution control performance. Experience at Penn State University and other groundwater recharge sites shows that the water returned to the groundwater reservoir was suitable as a drinking water source.
69. Picture: Spray irrigation site in the woods in the winter	The "Living Filter" experiment applies secondary treated wastewater to crop grass and forestland twelve months per year.
70. Picture: Land treatment design manual	A manual titled "Land Treatment of Municipal Wastewater", prepared jointly by the Environmental Protection Agency, the Army Corps of Engineers, and the Department of Agriculture contains information compiled from an exhaustive research of land treatment systems.
71. Words: The recovery and beneficial use of wastewater ...	In the Manual's own words: "The recovery and beneficial use of wastewater and its nutrient sources through crop production, as well as wastewater treatment and reclamation, allow land treatment systems to accomplish far more than conventional treatment and discharge alternatives. The utilization of land treatment systems has the potential of saving billions of dollars."
72. Picture: Advisory Group	Citizen advisors can help assure that land treatment receives its deserved consideration. You can help pick suitable sites, encourage farmers to use land treatment and
73. Words: Help pick suitable sites, Encourage farmers to use land treatment, Point out local problems	point out local problems which your consultant may have trouble identifying. Facility plans in which land treatment alternatives are eliminated with only cursory coverage will be rejected as not fulfilling EPA requirements. A facility plan should not be approved until coverage of the land treatment alternatives satisfies published guidelines.
74. "Thank You" slide	
75. EPA Logo	
76. Credit Slide	
77. Credit Slide	

Working for Clean Water

An Information Program for Advisory Groups

Land Treatment

What is land treatment?

When should land treatment be considered?

What are the advantages of land treatment?

What site factors are important to land treatment?

Citizen Handbook

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Land Treatment

What is Land Treatment?

It is an old idea that has come of age—in the West, that is. Orientals have recycled human wastes for centuries. Although this approach is based on the same principle, it is a different practice. Eastern cultures such as China use waste solids called "night soils." In the United States wastewater is used. Called land treatment or land application, it means *applying wastewater to land* rather than discharging it into lakes and streams.

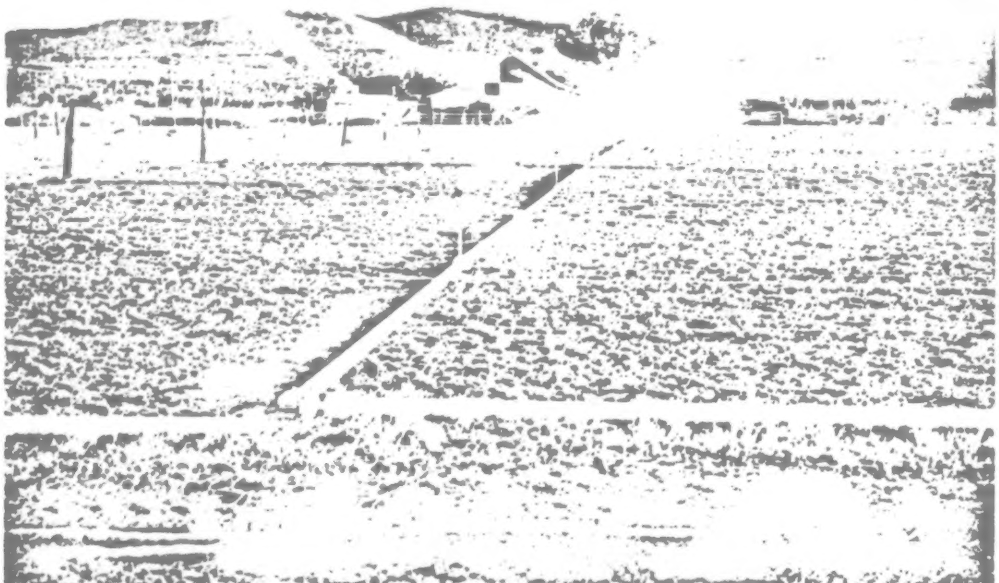
When wastewater is put onto land a whole series of physical, biological, and chemical actions take place. The soil acts first as a filter to strain out suspended solids. The remaining bacteria and dissolved materials are broken down biologically, or become absorbed into the soil. Plants growing on the ground surface also play an important role by removing water and nutrients such as phosphorus. The land treatment process is truly a "living filter" at work.

When Should Land Treatment Be Considered?

When should land treatment be considered? Always!

The Clean Water Act of 1977 is clear. Communities seeking federal funds for wastewater treatment systems *must* consider land treatment as an alternative treatment method. Land treatment is one of three broad categories:

- Treatment and discharge into surface waters (conventional waste treatment)
- Reuse of treated wastewater
- Land application and utilization practices.



Advantages of Land Treatment

Land treatment has several advantages over conventional waste treatment systems. They include:

- Recycling of plant nutrients
- Reuse of resources through crop production
- Retention of water in watersheds
- Recreation and open space
- Reduction of sludge.

Land treatment can remove nutrients as efficiently as the best conventional processes, while achieving additional benefits. The recovery and reuse of wastewater and nutrients through crop production is one advantage.

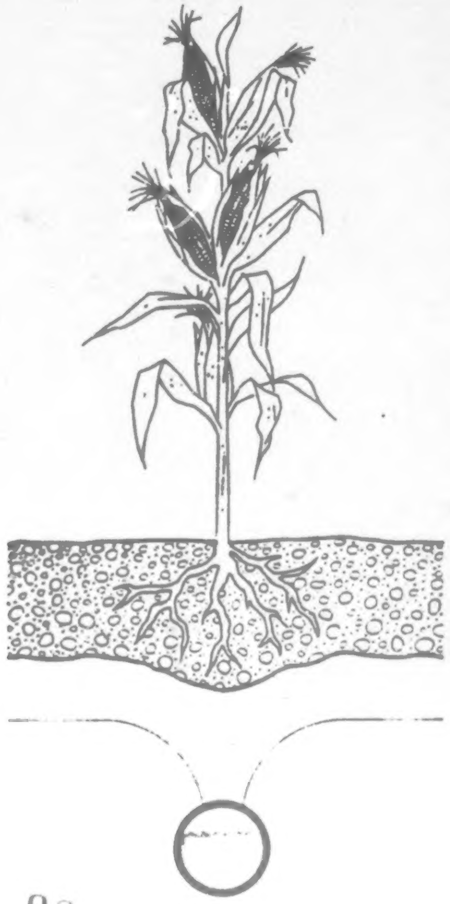
Another is to keep water in a watershed. In many conventional treatment systems it is common to discharge effluents miles from where waters are withdrawn and wastes are generated. In water-sparse communities this water transfer is a problem because local groundwater is not replenished.

Land treatment may also provide opportunities for recreation and open space to a greater extent than conventional systems. All of these activities, as well as wastewater treatment and reclamation, allow land treatment systems to accomplish far more than most conventional treatment and discharge alternatives.

Role of Advisory Groups

Citizen advisors can help assure that land treatment receives its deserved consideration. They can assist in the following ways:

- Help pick suitable sites including those set aside for parks, open spaces, and green belt areas.
- Through meetings and other informal contacts, bring farmers into the planning.
- Promote the consideration of wastewater as a *resource* out of place, not a problem.
- Carefully scrutinize the analysis of land treatment to make sure that technical and management aspects have been adequately evaluated.
- Point out local problems and opportunities which the consultants may have trouble identifying.
- Seek assistance from the state water pollution control agencies and the EPA.



This living filter at Muskegon provides advanced treatment for wastewater. Organic matter is decomposed by soil microorganisms. Nutrients are bound by plants and soil. Suspended matter is filtered out by the soil. Heavy metals, colored substances and viruses are adsorbed by organic matter and soil particles. After percolation through the living filter, the renovated water is [illegible]

Impetus for Land Treatment

Conventional wastewater treatment systems, especially those of a regional scope, are very expensive. Additionally, they are ill-suited to some localities.

In an effort to meet the needs of communities, and to stretch tax dollars, Congress passed two major water quality laws in the past decade. The Clean Water Act of 1972, PL 92-500, requires the United States Environmental Protection Agency (EPA) to encourage waste management that recycles nutrients in agriculture, forestry, and fish farming. The Clean Water Act of 1977, PL 95-217, reemphasizes recycling through innovative and alternative wastewater systems, including land treatment. This legislation authorizes monetary incentives. They include:

- Making land used for wastewater storage and application eligible for grant assistance
- Allowing land treatment alternatives to receive funding even if they are 15 percent more costly than conventional treatment
- Supplying federal grants for 85 percent of the construction costs
- Allowing full modification or replacement if innovative or alternative projects fail to meet required water quality criteria.

In implementating the Congressional mandates, the EPA administers policies on land treatment. They include:

- Vigorous promotion of land treatment to reclaim and recycle municipal wastewaters
- Full justification when land treatment is rejected in facilities planning
- Exclusion from EPA funding those works designed for high levels of treatment before applying wastewater to the land.

Facility plans which give only cursory coverage to land treatment will be rejected as not fulfilling EPA requirements.

Land Application Techniques

Land application techniques consist of three categories:

- Slow-rate irrigation
- Overland flow
- Rapid infiltration (infiltration-percolation).

Wastewater is usually applied by spraying, flooding, or running between ridges and furrows.

Municipal wastewater, usually treated to some extent, is applied to land mainly by the irrigation and rapid-infiltration methods. Municipal installations currently are just beginning to use overland flow. Industrial wastewater, generally screened or settled, is applied using all three approaches, with the choice usually dependent on the type of soils.

The water just does not disappear when it is placed on the soil. It becomes part of the water resources of the region! For this reason, the land-treated wastewater must meet the criteria established for the receiving waters. For example, permanent groundwater recharge must meet drinking water quality criteria, and surface runoff must meet surface water quality criteria.

Treatment of Wastewater Prior to Land Application

Pretreatment requirements vary from state to state. Some are more demanding than others. The EPA asks that states modify stringent preapplication treatment requirements when a lesser level of treatment will still protect the public health, protect the quality of surface waters and groundwater, and ensure satisfactory performance of the wastewater management system.

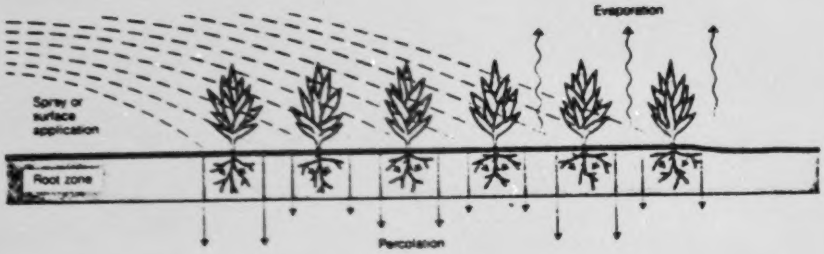
States should adopt flexible criteria and standards for regulating land treatment systems. This flexibility conserves resources, and supports systems that are best suited for local conditions. For example, only simple screening or grinding may be appropriate for overland flow systems in isolated areas with no public access. However, extensive removal of organic pollutants followed by disinfection may be necessary for slow-rate systems in public areas such as parks or golf courses. Secondary wastewater treatment prior to land application should be held to a minimum.

Slow-Rate Irrigation

Irrigation is the most widely used type of land application. As many as 3,000 U.S. communities practice this approach. Factors controlling this type of land application are the site, the method of irrigation, the application rate, the management and cropping practices, and the expected pretreatment or removal of wastewater constituents.

The major factors involved in site selection are:

- Type, permeability, and depth of soil
- Nature, depth, and type of underground geological formation
- Soil surface topography
- Considerations of public access to the land.



Slow-Rate Irrigation

Soil drainage is perhaps the primary factor. Drainage is important because, coupled with the type of crop or vegetation, it directly affects the application rate for liquid. The ideal soil is moderately permeable. The agricultural extension service or neighboring farmers can be consulted about the drainage of cropland. University specialists can offer advice on forest or landscape irrigation.

For crop irrigation, slopes are generally limited to about ten percent or less, depending upon the type of farm equipment to be used. Heavily-foliated hillsides up to 30 percent in slope have been spray-irrigated successfully.

An ideal site for wastewater irrigation is in an area with limited contact between the public and the irrigation water. An obvious exception is the controlled irrigation of parks, golf courses, and other public use areas.

Irrigation Factors

The type of irrigation system depends on soil drainage, crop, topography, climate, and economics. These factors control the rates at which effluent substances can be removed by the soil.

Loading rates are important for water, nitrogen, heavy metals, and organic matter. A loading rate is the amount of water or pollutant placed on the soil in a certain length of time. Organic loading rates are less significant if an intermittent application schedule is followed. Nitrogen loading rates are of concern because of nitrate passing down through the soil into the groundwater. If wastewater is applied at a proper rate, crops can absorb and utilize the nitrate, thus preventing it from entering the groundwater.

System Life

Wastewater irrigation sites can have long, useful lives. For example, systems have been operating in Cheyenne, Wyoming, since 1881 and in Fresno, California, since 1891. Many other irrigation systems in the United States and throughout the world have equally long records of successful operation.

Irrigation has many positive effects on the environment, such as providing wildlife habitats when public access is properly managed. It is effective for recycling nutrients to the land. In general, irrigation is considered the most reliable approach to land application.

Economic Considerations

Capital costs for irrigation include those for land, and facilities for pretreatment, transmission, and distribution of effluent. The main operating and management costs are for labor, power, and system maintenance.

The economic benefits from irrigation can offset some of the operating expenses. In addition to the water, wastewater nutrients are an increasingly important contribution to crops. These nutrients replace synthetic fertilizers that become more expensive as energy costs increase. *In 1975, Muskegon County, Michigan, realized $714,000 from the sale of crops and services. These revenues helped to markedly reduce the gross operating costs of $1,946,000 for the land treatment system. Over four years of successful operation, the crop revenues have been approximately 30 percent of the annual operating and maintenance costs.* The Muskegon facility used publicly-owned land. For successful land treatment projects, land acquisition is not necessary in many cases.

Overland Flow

In overland flow the wastewater is applied to sloping land. The water runs downhill to a collection ditch. The crop or vegetation on the ground surface is not always harvested.

Overland flow has been used for a long time. The method has been tested on municipal wastewater, but in the United States it has been more completely developed for food processing industries. Several community systems are now under

Irrigation
Site
Analysis

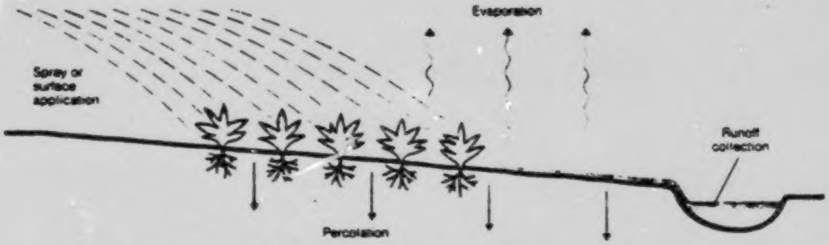
Factor	*Criterion*
Soil type	Loamy soils are preferable, but most soils from sands to clays are acceptable
Soil drainage class	Well-drained (more than 2 in./hr.) soil is preferred
Soil depth	Uniform depth of at least 5 to 6 ft. throughout the site is necessary
Depth to groundwater	More than 2 ft. is preferred at all times
Groundwater control	Drainage may be necessary to ensure performance if water table is seasonably shallow
Groundwater movement	Velocity and direction must be determined
Slopes	Up to 15% slopes are acceptable with or without terracing
Underground geological formations	Rock strata are analyzed for interference with groundwater or percolating water movement
Isolation	Moderate isolation from the public is preferable, the degree depending on level of preapplication treatment, method of application, crop, and site use
Distance from source of wastewater	Economics

design or construction in southern states. The important factors in overland flow are:

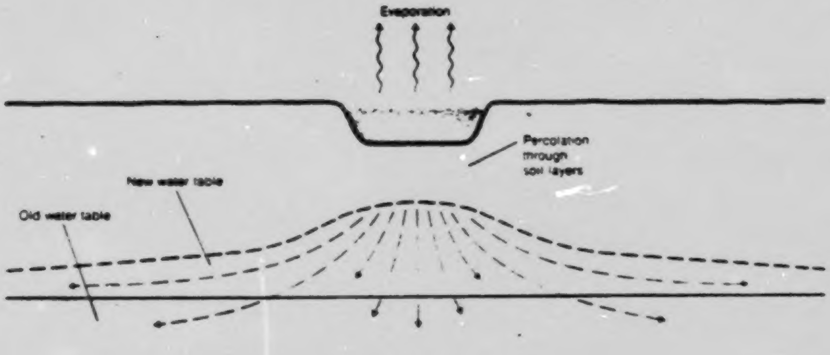
- Site selection
- Design loadings
- Management practices
- Type of pretreatment.

The runoff water collected and discharged into a stream has to meet the treatment and discharge criteria.

The treatment of wastewater by overland flow is less complete than for irrigation. Also, relatively less is known about the useful life of an overland flow system. In Melbourne, Australia, the treatment system has been operating successfully for many decades as a winter alternative to irrigation. The oldest operating systems in this country have been treating industrial wastewaters for up to 20 years. The literature suggests that a long useful life may be possible if effective management continues.



Overland Flow



Rapid Infiltration

Adverse environmental effects should be minimal. As the runoff flow occurs, it must be stored, reused, or discharged to a surface watercourse. Infiltration into the soil is slight and chances of affecting groundwater quality are low.

Overland flow facilities are very competitive with conventional methods where site and climatic conditions are favorable for year-round operation.

Rapid Infiltration

A third option is rapid infiltration. In this technique wastewater quickly moves through the soil until it becomes part of the groundwater.

Soils permitting the application of one to eight inches of water per day are best for successful use of rapid infiltration. Acceptable soil types include sand, sandy loams, loamy sands, gravels, and gravelly sands. Very coarse sand and gravel are less desirable because they allow wastewater to pass too rapidly through the first few feet, where the major biological and chemical actions take place.

Other factors of importance include:

- Percolation rates in the subsoils
- Depth, movement, and quality of groundwater
- Topography
- Underlying geological formations.

To control the wastewater after it infiltrates the surface and percolates through the topsoil, characteristics of the subsoil and groundwater layer must be known. Recharge should not be attempted without specific knowledge of the movement of water through the soils.

Wastewater treatment by rapid infiltration varies considerably with soil characteristics and management practices. This process is very effective for removal of suspended solids, organic substances, phosphorus, and metals. It is less effective for taking out nitrogen, although special management techniques have obtained nitrogen removals up to 80 percent. Overall nitrogen removal averages 30 percent for commonly used operating techniques.

The useful life of a rapid infiltration system may be shorter than irrigation or overland flow systems. This situation is caused by high loadings of inorganic constituents, such as phosphorus and heavy metals, and by the attachment of these substances to the soil particles. Therefore, the loading rate and soil characteristics are important in determining how long a site may be used. Overall phosphorus removal is excellent for systems which have been operating about 35 years at moderate application rates of seven to fifteen inches per week. At Lake George, New York, phosphorus has saturated about fifteen feet of soil, but some percolation beds have an additional life span of 100 years because of the depth of sand still available for phosphorus removal.

From the standpoint of environmental effects, rapid infiltration is also a satisfactory method of wastewater treatment. Many systems when managed properly are quite reliable.

Capital and operating costs for infiltration-percolation systems will generally be less than those for irrigation or overland flow because less land is used and distribution is by gravity flow. For high-loading rate systems, however, prior needs and costs are substantially greater.

Other Land Application Techniques

There are several other approaches to land application, including:

- Subsurface adsorption beds
- Deep-well injection
- Evaporation ponds.

Such techniques are very limited in their applicability. Adsorption beds are subsurface fields in which effluent seeps into the ground. Usually limited to small flows, they are prevalent in rural areas as individual or cluster systems for disposal following septic tank treatment. Deep-well injection involves pumping wastewater to the groundwater table. It provides no substantial renovation to the wastewater, and is prohibited unless pretreatment is sufficiently high. Evaporation ponds also have limited use because they require large amounts of land, and cannot be used except in very dry climates.

Important Siting Factors

Advisory groups should pay close attention to the following points concerning the siting of land treatment systems.

Some of these points are:

- Because land treatment requires land and land involves cost, land application systems may be too expensive for communities, especially when acreage is near a large city.
- High land costs favor conventional treatment systems, especially where large buffer areas are required around the application areas.
- Land treatment sites are not limited to municipal ownership. Public agencies and farmers can combine resources to create mutually beneficial systems based on leases or easements.
- A city may supply the pretreated wastewater to a holding pond. Through agreements with the city, farmers can withdraw the water and apply it to their lands.
- A city must maintain adequate operational and monitoring controls to protect water resources when utilizing lease or easement arrangements to supply water for the irrigation of private land.
- Regional differences in factors such as climate and availability of land are important.

Cost-Effectiveness of Land Treatment

Today the issue of cost-effective wastewater treatment closely relates to system performance. The EPA now requires secondary treatment for all municipalities. Several consultants have made cost comparisons of land treatment versus other alternatives. These analyses show that land treatment is very competitive with conventional treatment under favorable site conditions. There are so many site specific variables that it is impractical to make many general projections about average costs for the slow-rate, rapid-infiltration, or overland flow processes. However, some generalizations can be made about the comparative costs of land treatment, conventional secondary treatment, and advanced waste treatment processes:

- Land application systems are less sensitive to the economics of scale, meaning that large facilities are not needed to achieve low costs as compared to conventional treatment processes.
- Under favorable conditions land treatment is more cost-effective than other treatment technologies for removing phosphorus, nitrogen, and suspended solids.
- Under unfavorable conditions (cold climate or poor soil) land treatment becomes less competitive because of greatly increased capital costs for storage and land area. However, differences exist among the types of land treatment. While slow-rate systems are particularly vulnerable to these conditions, rapid infiltration systems are less susceptible.
- Because the costs of operation and management are lower for land treatment systems, the local share of total costs is much smaller than with advanced wastewater treatment facilities. Slow-rate systems usually recover a substantial fraction of the overall costs of treatment. These revenues come from the sale of crops or irrigation water.

Summary

The technology of land treatment systems is well-proven all over the world. The use of this technology often depends more on policy considerations than it does on technological ones.

Because land treatment processes contribute to the reclamation and recycling requirements of the Clean Water Act as well as conserve energy, they are defined as an alternative wastewater management technology. As such, land treatment proposals are eligible for a ten percent increase over the usual 75 percent federal grant. This 85 percent federal share, plus the potential for low long-term operations and management costs, may be particularly beneficial to smaller communities.

While they are not accepted everywhere, land treatment systems have the potential for saving billions of dollars. This will benefit not only the nationwide water pollution control program, but will also provide a way to recover and recycle wastewater as a resource.

The EPA currently requires each applicant for construction grant funds to thoroughly analyze wastewater management alternatives, including land treatment.

Requiring stringent wastewater treatment prior to land application has quite often made land treatment processes too costly.

The advisory group must be assured that appropriate federal, state, and local requirements and regulations are carried out, but not in a manner that arbitrarily blocks land treatment projects.

Given the strong and clear mandate of the Clean Water Act, an advisory group should expect that the consultant and grantee will give careful consideration to land application of wastewater. Advisory group members can help by locating suitable application sites, and by seeing that all appropriate factors are taken into account. If land application is feasible the advisory group can lead the way for public acceptance of this treatment method.

Because land treatment is often misunderstood, and sometimes causes local controversies, it may not be easy to develop. Public forums, presentations by experts from EPA and the states, field trips, and community workshops can help to foster reasoned and informed discussion of the issues.

Land Treatment Using Spray Irrigation

Muskegon County, Michigan

Adapted from Wastewater: Is Muskegon County's Solution Your Solution? *EPA-905/2-76-[illegible], MCD-34. Chicago, IL: U.S. Environmental Protection Agency, Region V. August 1979. 55 pp.*

Near the end of the 1960's, citizens, industry, and community leaders in Muskegon County were becoming aware of their overburdened wastewater treatment facilities. The county's three main recreational lakes were being polluted. Because of wastewater problems, older industries were leaving or closing rather than rebuilding. New industries and businesses were not coming to Muskegon.

Muskegon County's Solution

Community leaders and planners in Muskegon County came to grips with the seriousness of the problems in 1969. Enormous political difficulties were involved in uniting the many independent communities within the county toward development of a common wastewater treatment system. Authorities, including the state and the Federal Water Quality Administration (a predecessor of EPA) had to be convinced that Muskegon's idea was worthy of funding and support. Large-scale projects using wastewater for spray irrigation and crop production in a northcentral location of the United States was an untested concept. This made very difficult the task of designing and building a large spray irrigation system to provide efficient treatment while protecting the environment and enriching the quality of the soil.

The Cost

Combined county, state, and federal efforts have resulted in a land treatment system which is yielding very cost-effective treatment and utilization of wastewater. Construction costs were approximately $44 million. Federal sources supplied approximately 45 percent of the funding.

The 1978 total cost for treatment was 25¢/1,000 gallons of wastewater. This cost is charged to users via a 17¢/1,000 gallon operational fee, a 4.5¢/1,000 gallon debt retirement fee, and acreage charges. Muskegon County's sewer charge is lower than any of several systems surveyed, regardless of the level of treatment given to the wastewater.

The Setting

Muskegon County, Michigan (population 160,000), which lies directly along the Lake Michigan coast, began its plan prior to Public Law 92-500.

The county-wide land application system has two separate wastewater treatment areas, a 10,500 acre site near Muskegon and a 600 acre site near Whitehall. Renovated water from the Whitehall site enters the White River and runs into White Lake and Lake Michigan. Renovated water from the main Muskegon site is collected by under-drains and discharged at two points. One discharge enters Mosquito Creek and then flows into Muskegon Lake before entering Lake Michigan. The other discharge enters Big Black Creek which feeds Mona Lake before emptying into Lake Michigan.

The Main Muskegon System

The main Muskegon County Wastewater Management System has a 42 million gallons per day (mgd) wastewater treatment design capacity. The system consists of collection, transmission, aeration, storage, irrigation, soil, crop, and drainage components. The system treated 27 mgd of wastewater at startup in 1975, 60 percent of which was industrial flow, leaving a reserve capacity of 15 mgd for serving additional residential and industrial development.

Wastewater is collected via a conventional sewer system and pumped eleven miles to the land treatment site. After reaching the management site, wastewater is treated in aerated lagoons and then discharged to the large capacity (150 day retention time) storage lagoons. Prior to entering irrigation ditches the water is chlorinated to meet health standards.

The pretreated wastewater is distributed to irrigation rigs by buried pipes. There are 54 irrigation rigs located in circular fields of 35 to 140 acres. The soils are mostly sandy.

During the 1978 season, over 5,000 acres were planted with corn, and irrigated with wastewater up to 4 inches per week. Another 100 acres were in rye grass. Total wastewater applied to the 5,200 acres varied from none to

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over 100 inches per field during 1978. Irrigation was performed from mid-April to mid-November with time out for cultivating, planting, and harvesting the corn crop. Thus far corn has been the main crop, and it has been marketed through normal channels.

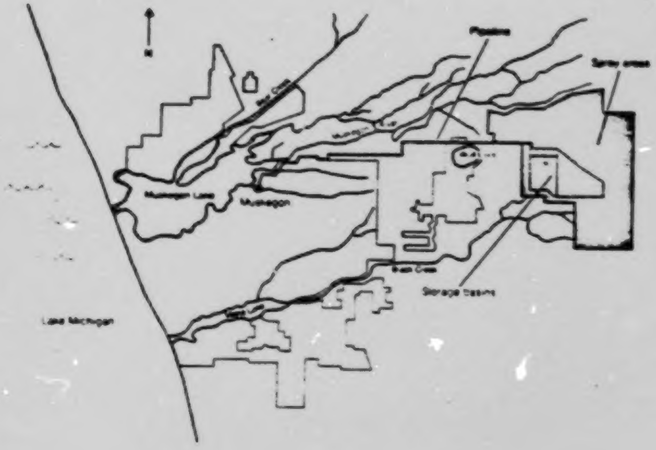
Recycling-Resource Recovery

The irrigation-soil-cropping phase of the wastewater treatment system provides advanced wastewater treatment, as well as utilizes nutrients in the wastewater for growing crops. The sale of corn reduced the 1.9 million dollar operating cost for wastewater treatment during 1978 by about one-third. *Over $120,000 worth of nitrogen, phosphorus, and potassium from the wastewater was reclaimed as fertilizer in 1978 to improve the soil and grow food.* Additional chemical fertilizer was injected into the wastewater only during the active part of the growing season to increase corn growth and yield, and to stimulate increased removal of phosphorus, potassium, and other wastewater nutrients.

Operations, Management, Research, and Development

The entire system is being operated by 40 full-time persons and an additional part-time labor force of 10 workers. The success of this operation depends heavily on expert management, which in turn is based on sound business, farming, engineering, and scientific skills. Personnel also have laboratory analysis and research capabilities.

Management has benefited from the creation of a farm advisory board made up of agricultural agents from Michigan State University, and from a research advisory board made up of EPA personnel. As a direct result of good management, assisted by research and development efforts, progressive improvements have been achieved and operational problems have been overcome at very modest cost.



Outlook and Life Expectancy

The Muskegon County Wastewater Management System has maintained its successful operation since 1974 by producing highly renovated wastewater while, at the same time, using wastewater and recycled nutrients to produce field corn. Pollutant removal has remained the same since start-up: 98 percent for BOD, suspended solids, and phosphorus; and about 75 percent removal of nitrogen. Average yields on 5,000 acres of corn irrigated with wastewater increased from 60 bushels per acre in 1975 to 75 bushels per acre during 1976 to 1978. This yield has been consistently higher than the county average even though the primary purpose of the system is to renovate wastewater. The income from sale of corn has continued to help offset operational costs such that the net operation and maintenance cost in 1978 (including debt retirement) was about 25¢ per thousand gallons of wastewater treated. This is an increase of about 1¢ per thousand gallons over the 1975 figure.

Increased Agricultural Productivity by Renovation/Reuse of Wastewater in Muskegon

	Corn Yield and Income				
	1974	*1975*	*1976*	*1977*	*1978*
			bu/acre		
Wastewater site	28	60	81	73-75	73-75
County average	55	66	45-50	60	71
			millions of dollars		
Gross crop revenue	0.35	0.7	1.0	0.9	0.9

Finally, Muskegon is in the process of expanding its system. Not only are additional residential and commercial areas in the county being connected, but there are increased flows from industrial expansion. The county plans to add additional land, irrigation rigs, and other equipment for treating the anticipated increase in wastewater volume.

Any wastewater treatment system has limitations. The Muskegon County Wastewater Management System is no exception. In its present mode most of the cropped soils at Muskegon are expected to adequately remove wastewater contaminants like phosphorus for much longer than the design life of the project, at least 50 years. If and when the land becomes saturated with phosphorus and can no longer provide adequate phosphorus removal, many other uses for the land will be possible. Alternative uses such as energy production and recreation are being developed.

Need More Information?

Guide to Clean Water Act Amendments. EPA No. OPA 129/8. Washington, DC: U.S. Government Printing Office, November 1978.

> This publication contains many of the provisions of PL 92-500 (The Federal Water Pollution Control Act of 1972) and PL 95-217 (The Clean Water Act of 1977). It can be obtained from the U.S. Government Printing Office, Washington, DC 20402.

Hartman, Willis J., Jr. *An Evaluation of Land Treatment of Municipal Wastewater and Physical Siting of Facility Installations.* Washington, DC: U.S. Department of the Army. May 16, 1975. 65 pp.

> This reported study and evaluation is directed toward providing some guidance to those who might select land treatment as an alternative process. Particular emphasis is placed on siting facilities in more populated areas. The report costs $8.00 and can be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. The order number is ADA016118.

Jewell, William J. and Seabrook, Belford L. *A History of Land Application as a Treatment Alternative.* EPA-430/9-79-012. MCD-40. Washington, DC: U.S. Environmental Protection Agency, April 1979. 83 pp.

> This publication presents a complete history of land treatment technology including discussions of policy and a consideration of the future of land treatment. This publication can be ordered from General Services Administration (8FSS) Centralized Mailing List Services, Bldg. 41, Denver Federal Center, Denver, CO 80225. Indicate the MCD number and title of publication.

Land Treatment of Municipal Wastewater Effluents. Three Volumes. Cincinnati, OH: Technology Transfer Municipal Seminar Publications, 1979.

> These publications cover the various methods of wastewater treatment techniques on land including slow-rate irrigation, rapid infiltration, and overland flow. It is a good set of reference manuals suitable for persons with limited knowledge but interested in land treatment. They are available free from CERI, Technology Transfer, U.S. Environmental Protection Agency, Cincinnati, OH 45268. Specify order number 4010.

Pounds, Charles E., Crites, Ronald W. and Smith, Robert G. *Technical Report Costs-Effective Comparison of Land Application and Advanced Wastewater Treatment.* EPA-430/9-75-016. MCD-17. Washington, DC: U.S. Environmental Protection Agency, November 1975. 25 pp.

> This report is intended to be used for general cost comparisons of advanced wastewater treatment and land application systems. The curves shown in the figures are presented only for comparative purposes and should not be used to estimate costs of specific alternatives in facilities plans. This publication can be ordered from General Services Administration (8FSS) Centralized Mailing List Services, Bldg. 41, Denver Federal Center, Denver, CO 80225. Indicate the MCD number and title of publication.

Survey of Facilities Using Land Application of Wastewater. EPA-430/9-73-006. UNA-03.0. Washington, DC: U.S. Environmental Protection Agency, July 1973. 377 pp.

> This report presents the results of a field survey of 100 facilities where domestic or industrial wastewater effluents were applied to the land. Ninety-nine tables and the collected data are presented along with photographs of representative facilities used to illustrate land application practices. This publication can be ordered from General Services Administration (8FSS) Centralized Mailing List Services, Bldg. 41, Denver Federal Center, Denver, CO 80225. Indicate the number and title of publication.

Assistance may be provided by the Land Treatment Coordinator in the Water Division of each EPA regional office.

Glossary

Absorption Bed—a subsurface leaching system in which effluent is piped to an underground field and allowed to seep down through the soil.

Advanced Wastewater Treatment—treatment processes that go beyond secondary or biological stage; removal of nutrients such as phosphorus and nitrogen and toxic substances.

Aquaculture—underwater farming of plants and animals.

Aquifer—underground bed or layer of earth, gravel, or porous stone that serves as a reservoir for groundwater.

Biochemical Oxygen Demand (BOD)—amount of dissolved oxygen required in the biological process of breaking down organic matter in water.

Buffer Zone—land surrounding a land treatment site that is not used in the treatment process and acts as a health and safety barrier between the site and the public.

Cost-Effectiveness Analysis—determination of whether a project or technique is worth funding; involves both monetary and nonmonetary costs.

Deep-Well Injection—pumping high quality treated wastewater into the groundwater table.

Effluent—treated or untreated wastewater discharged into the environment.

Infiltration—the action of water moving through small openings in the earth as it seeps down into the groundwater.

Land Treatment—process of putting wastewater onto land for the removal of pollutants; sludge (the solids removed from wastewaters) also may be disposed on land, but it is not called land treatment.

Loading Rate—rate at which pollutants accumulate in soil or surface waters.

Nitrification—biological conversion of nitrogenous matter into nitrates.

Overland Flow—land application technique in which wastewater is sprayed onto gently sloping ground planted with vegetation.

Percolation—downward flow of water through pores or spaces in rock or soil.

Rapid Infiltration—land application technique in which wastewater is applied to land and is allowed to percolate through the soil and enter the groundwater, thereby treating the wastewater.

Secondary Treatment—microbiological treatment of wastewater to consume organic wastes usually in the presence of oxygen. Floating and settleable solids, and about 85 percent of oxygen demanding substances and suspended solids are removed. Disinfection with chlorine is the final stage of secondary treatment.

Silviculture—a phase of forestry dealing with the establishment, development, reproduction, and care of forest trees.

Suspended Solids—small particles of solid pollutants in sewage that cause cloudiness and require special treatment to remove.

Watershed—the land area that drains into a stream.

Section 7:

Instructional Skills

INSTRUCTIONAL SKILLS

The public involvement process requires a concerted effort to transmit information in a systematic way and to educate individuals about the topic under discussion. Instructors have been refining the education process for many years. Although educational research indicates that many factors influence how people learn and what people learn, there are some principles that appear to be essential and can help public participation coordinators to be more effective.

Initial requirements to plan what information is to be transmitted, define the audience, and determine the amount of information required for understanding decision-making are usually referred to as content objectives. By defining the content, participants will gain a better idea about what concepts are important and what they are expected to do with the information. Equally significant to those participating in consultation experiences are the process objectives. When planning a session, public participation coordinators should also inform participants about what behavior is expected of them during a session. For example, it might be important for participants to engage in problem-solving skills. By stating and defining both the content and the process objectives, there is an increased chance that those present will actually participate and use the information transmitted to attain the goal of the session.

Those skilled in presenting information continuously evaluate their planned activities throughout the sessions. Feedback, gathered by asking questions, observing participant responses, and listening to comments, can be an effective method to determine the level of understanding of either the content or the process. Participants also need feedback to determine how well they are assimilating the information. Public participation coordinators should plan feedback activities.

A document prepared for the U.S. Environmental Protection Agency by faculty members from Teachers College, University of Cincinnati, offers suggestions to aid those involved with transferring information. Presentation Skills and Strategies[*] was designed to succinctly offer those involved with advisory group training some guidelines to improve instructional activities. Excerpts from the original document are presented. It is also suggested that those who routinely present information consider involvement in a training course or academic course that offers instructional skills development.

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[*] Learning Resource #11: Thaddeus W. Fowler and Others, Presentation Skills and Strategies for Water Quality Instructors. University of Cincinnati, Teachers College, Cincinnati, OH 45221.

OVERVIEW - A verbal outline of the sequence of events that are to occur during a lesson.

Usage: Initiation

During a lesson, students or trainees learn more efficiently if they are not required to reorient themselves to different tasks without any advance preparation. Learning is enhanced when the instructor and the students move from activity to activity without interruption, in other words, when activities "overlap". The easiest way to assure that this transition between activities will be smooth is to let the students know, in advance, what the schedule of events will be within the lesson.

The method that is most effective for presenting the schedule of a lesson is the overview. An overview is a verbal description of the activities that will occur during the lesson; it is a short procedural outline. Its purpose is to establish a clear connection between the objective for the lesson and the activities that are to be conducted. In addition, it allows the students to prepare themselves for subsequent activities by being forewarned of what is to follow.

The overview has three major sections:

a. A statement of the lesson's objective. ("Today's lesson will help you to design screening devices.")

b. An outline of the lesson's activities. ("We will discuss those areas of plant design in which operating problems commonly occur and then I will show some slides of various screening devices. Tomorrow, when you visit the Barnegat plant, you will see how they solved their screening problems.")

c. A description of any special procedures to be followed. ("When I show the slides, make some quick sketches of the screening devices in the slides to help you remember some of the operating problems that come up.")

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ADVANCE ORGANIZER - An introductory statement that helps the student organize new material and relate it to what he/she already knows.

Usage: Initiation, Information Transfer

Often, when factual material is presented to students or trainees, much of it is "lost" because there is no logical place for the students to "store" the information in their existing thought patterns. If the students have no previous experiences to which they can relate the new information, especially technical and factual material, they are not likely to remember it for any length of time. For these reasons, it is important for students to be given an opportunity to relate new information to what they already know and to build a mental structure or "map" that shows how the new factual information is interrelated.

An advance organizer is a statement made by the instructor at the beginning of the lesson that helps the student store and retrieve the new information that will be presented. The advance organizer acts as a connection between the material to be learned and the students' existing thought and memory patterns. In addition, the advance organizer helps the student organize the new material mentally so that it will be stored more permanently and recalled with ease.

Advance organizers are most useful in helping students learn factual material because they provide a scaffold on which to store the bits of factual data. Three kinds of advance organizers are commonly used; each is given at the outset of the lesson, before any new information is presented.

Definition. Definitions may be given if the new material to be learned can be connected, easily, to information the student already possesses. The definition should state the (A) new concept, how it is connected to the (B) existing information the student already knows, and the important (C) characteristics or attributes of the new idea. Example 1 shows a definition advance organizer with each portion labeled.

Generalization. A generalization is a statement that presents some general principle or axiom to which the new material can be tied or which explains the material to follow. Example 2 presents a generalization advance organizer.

Anology. Analogies are probably the most useful of the advance organizers because they allow the instructor to compare the new material with knowledge that he/she is reasonably certain the participants already possess. Anologies are frequently called "comparative organizers", such as the one shown in Example 3.

Examples:

(A) (B)
1. (Definition) "Retrofits are water conservation devices that are
(C)
typically added to existing appliances and can, usually,
(C)
be installed by the consumer."

MEDIA (AUDIO-VISUAL AIDS) - Artifacts (real things), models, films, videotapes, slides, pictures, tape recordings, overhead transparencies, or hand-outs which convey information or emphasize a point. The integration of media into a presentation is of utmost importance.

Usage: Initiation, Information Transfer, Closure

During a presentation, it is expected that students will learn many facts and concepts in a short span of time. Often the flow of information from the instructor can be overwhelming. Concepts and definitions are new and unfamiliar to students. Information is often abstract, difficult to picture and hard to get hold of. Sometimes it is necessary to get and hold a group's interest when they are not particularly motivated to pay attention and process new information. Extra emphasis might need to be placed on a particular topic. All of these difficulties can be more easily overcome through the use of a variety of audio-visual aids. Media can stimulate interest and increase the amount of learning that takes place in a presentation.

There are basically three ways that media can be used in a presentation. Media can be used to emphasize the importance of some information and help students remember important points. Secondly, media can be used to present a concentrated collection of facts and information in an organized way and in a short period of time. Finally, media can be used to help students to learn or understand a new concept or idea.

Media for emphasis

A variety of forms of media can be used to help students to remember important facts and realize the importance of critical information. This emphasis is most easily reached through the use of some flexible media form such as a chalkboard, flip-chart, hand-outs, overhead transparency, and possibly 35 mm slides. As a instructor verbally relates important information or makes critical points, key words are written on a chalkboard, flip-chart, or transparency. Copies of a handout outlining the major aspects of the presentation could be distributed. Slides might be used for this purpose but a partially darkened room might be necessary and somewhat inconvenient. Care must be taken to use understandable terms and to time the emphasis with the verbal presentation.

Example:

Along with a discussion of aerobic digestion a transparency might be used. It is important to have students understand why aerobic digestion is used. Early in the discussion a suitable transparency (or flip-chart) might be:

AEROBIC DIGESTION
- PREVENT ODOR
- REDUCE VOLUME

Media to present complex information

Often an instructor must relate a large number of facts in a very short period of time. A verbal description of this information would take an extrodinary amount of time and would probably confuse anyone who remains alert enough to listen. A successful alternative would be to present the information as a chart, table, graph, or diagram. Slides, transparencies, flip-charts, or hand-outs can be used to communicate the information. Each student could then read the chart, etc. (possibly with guidance from the instructor). Comparisons within the data can be easily made and trends can be easily discovered. Films and videotapes can be used in the same way. Considerable information can be presented by one or more narrators. Complex charts, graphs, or diagrams can be presented and emphasized with color and even animation.

When media is used for the purpose of conveying complex information, students must be given ample time to review and interpret the data. This process can be helped if the instructor explains the use of the chart or diagram. The instructor can verbally direct students' attention to important aspects of the information or media presentation. Questions might be asked by the instructor in order to focus attention to specific data or trends and to check on student understanding.

Example:

> A transparency is used to present information on a sludge flash dryer system. The transparancy would show diagramatically the relationship of furnace, hot gas duct, wet sludge conveyer, cyclone, and any product conveyor.

Media used to teach concepts

Another way in which media can be used is as a resource to teach a concept or new idea. A concept is more than facts or a collection of data. Concepts are general principles which summarize facts. They provide some general understanding or framework within which specific information fits. The task of helping a student learn a new concept is not an easy one. If students are to really understand a concept, then the instructor must help students achieve the understanding and not merely expect them to memorize a definition. Media can be used to improve the learning of concepts.

Persons actually learn concepts on their own. They must be provided basic information, data, or facts. But, the general principles which unite these facts must be discovered personally. An instructor can help students discover concepts by presenting information in a clear and concise way so that trends and generalizations are easy to identify. Attention can be directed to the most pertinent information and well designed questions can be asked to focus attention on important facts. Also, questions are used to encourage students to make generalizations. Various forms of media make it much easier for students to process a variety of information leading to a generalization or concept. There is an optimum way in which to use the media.

People learn best when they are eased gently into a new learning situation. Their attention must be gotten and held. They learn best if they first have a general picture and then focus on the details. Their first contact with a new concept should not be a verbal description of the concept. Students should first be shown a situation in which the concept is in operation. This situation should be "concrete"; as near to real-life as possible. Real-life situations are, however, difficult to observe. Media can be used to substitute for real occurances. Simulations, films, videotapes, and possibly pictures and slides work best to focus attention and encourage the exploration of new concepts.

Next, an abstraction of the real-life situation should be made. This abstraction can be in the form of diagrams, charts, tables, graphs, photographs or even cartoons. Through this abstraction students are forced to think about the most important aspects of the situation. They processs information which will lead to an understanding of the concept. Questions asked by the instructor help students focus their attention and analyze the information. At this point students may be asked to make a generalization (state in their own words their understanding of the concept). Alternatively, the instructor might explicitly state the concept.

Finally, students should be asked to make application of the concept. A new problem situation might be described verbally, and students asked to solve the problem. Media can be used to portray the problem situation. Students can be asked to explore a real local problem involving the concept or principle and work toward a solution.

Example:

The presentation on "Cost-Effectiveness Analysis" begins after a few focusing comments with a slide-tape, "Controversy on the Pennypack". Here a general overview of the technique and related benefits are presented in a case study approach. The slide-tape gives participants a general understanding of the technique and reasons for using the method. Then, the participants are shown in detail exactly what cost-effectiveness analysis is with the aid of flip charts or transparencies and handouts. Important and detailed information is given. Finally, through discussion the concept of cost-effectiveness analysis is used and applied to a specific situation.

A presentation on land application of wastewaters begins with a general film showing a variety of land application systems. Here a general overview of the purposes, techniques, and problems are given. Then, students would be shown exactly how such a system works using slides to help explain design criteria and process control. Finally, through a discussion the process control is reviewed and maintenance considerations are explored.

QUESTIONING STRATEGIES - A planned sequence of questions which focuses attention on specific points and determines how well students can address related areas.

Usage: Information Transfer

An instructor needs to be able to determine if studentshave understood his presentation. Misunderstandings and knowledge gaps need to be identified. Students' abilities to apply information need to be assessed. A feel for the students' ideas and attitudes about relevant issues and problems must be developed. Students must become motivated and involved in the presentation. An effective questioning strategy is a good approach to determine the knowledge of students, their ability to use this knowledge and their attitudes. Questions also help guarantee the involvement of the students in the presentation.

Instructors frequently use questions to check the retention of previously learned information or to focus thinking on a particular point. "What is meant by the term multiple use in section 201 of the Federal Water Pollution Control Act?" and "Name three examples of multiple use opportunities along drainage and sewer rights-of-way that were cited in the film we just saw." are examples of this type of question. They are called closed questions. The instructor has a direct answer in mind and the students' task is to give that response.

At other times the instructor will use questions to promote a discussion or student interaction. These questions stimulate greater information processing. They allow freedom to hypothesize, speculate, and share ideas. "If you were designing a water treatment plant with multiple use opportunities for a community, what would you include and why?" and "What approaches would work in a community like Smithville to solicit support for a new waste water treatment plant?" are examples of this kind of question. They are called open questions because there are several potentially correct responses.

A good closed questioning sequence requires students to recall information, to classify things or ideas, to pick out similarities and differences, and to apply previously learned information to new problems. Terms such as 'who', 'what', 'when', 'where', 'name', and sometimes 'how' are frequently signs of closed questions. An effective open question sequence, on the other hand, causes students to give opinions and their reasons for these opinions, to identify implications, to formulate hypotheses, and to make judgements based upon their own values and standards. Questions that begin with 'discuss', 'interpret', 'explain', 'evaluate', 'should', and 'what if' may indicate the use of open questions.

Effective presentations encourage information processing through a well planned series of questions that is sequenced from less to more abstract. They begin with closed questions then proceed to open ones. An example of such a sequence is the following.

1. What is a retrofit device?
2. What are the annual savings that can be anticipated when retrofit devices are placed in an existing home?
3. How does this compare with a savings in a new home?

(QUESTIONING STRATEGIES - continued)

4. Why is there such a difference between the savings in existing and new homes?
5. Suggest some approaches that could be used to encourage the use of retrofit devices.
6. Should there be legislation requiring the installation of retrofit devices in existing homes? Why? Should they be required in new homes? Why?

Notice that this sequence of questions requires students to process a range of ideas about retrofit devices. A questioning strategy such as this one helps the instructor determine how well his ideas have been assimulated and if students can use the information to address issues and solve problems.

Instructors who ask good questions frequently do not allow students enough time to answer them. After a question, a pause of only a fraction of a second is quite common! A longer pause after a question provides students with the opportunity to consider the question and formulate their response. When instructors pause for three to five seconds, the length and number of student responses increases; there is more speculative thinking; more inferences with supporting evidence are made; and contributions from reluctant students increase. Each of these events indicate that students are involved and processing information. It is also a good idea to pause after an initial response to encourage additional response and contributions from other students.

What you ask and the sequence in which you ask it are both important factors in planning an effective questioning strategy. It is equally important to know when to remain silent.

SUMMARIES - A review of the major points or concepts of a presentation, given either by the instructor or the students.

Usage: Closure

Students need to feel that a presentation has come to an organized and planned conclusion. They should not be left with an impression of incompleteness or that the presentation has been interrupted. The concepts and information that are related near the end of a presentation are often remembered best while earlier information tends to be partially forgotten or viewed as less important. Often it is necessary to end a presentation quickly because of time constraints. All of these needs can be met by providing a brief review or summary of the information presented.

Summaries can be given by the instructor or students can be asked to briefly review the information and concepts given during the presentation. When the instructor makes a summary, care should be taken to be sure that the major ideas of the presentation are restated. Information presented early in the session should be recalled. A summary is usually limited to only a few minutes.

The decision may be made to have one or more of the students summarize the information presented. When a student provides the summary, each of the other students will probably pay closer attention. However, the instructor has less control over the content, tone, pacing and accuracy of the summary. Care must be exercised in choosing which students give the summary. If students seem to be making an inadequate summary, it is usually easy to step in and agree with what has been said, make additional review statements, and casually correct any misinformation.

Example:

1. The content of a presentation on alternatives for small wastewater treatment systems might be summarized by the instructor with the following statements.

   "We have seen that because of the relatively high cost of collection systems in small communities, central treatment facilities may cost several times as much as on-site systems. On-site options include septic tanks, aerobic treatment tanks, soil absorption beds, mound systems, sand filters, disinfection, recycle systems, and waterless toilets. Central treatment options when necessary, include small diameter pressure, gravity, and vacuum sewers. It has been pointed out by several of you that neighboring towns have had good results with pressure sewers in town and absorption beds in the out-lying areas."

2. Instructor: "I would like someone to summarize the major points included in class today."

   Student-1: "Well, if you use these alternate ways, you can get extra federal funding. There are a number of ways to go: sand filters, septic tanks, those treatment tanks, and some other ways."

Student-2: "Mound systems can be used."

Instructor: "Don't forget disinfection and waterless toilets for some areas. What are the central treatment collection options?"

Student-3: "Aerobic treatment could be used."

Instructor: "Aerobic treatment can be used on-site, as we saw. Some collection options include small diameter pressure and vacuum sewers, and . . ."

Student-1: "Small diameter gravity."

Instructor: "Right."

Section 8:

Working With Groups

WORKING WITH GROUPS

Working with individuals as group members is one of the most significant responsibilities of public participation coordinators. Therefore, efforts must be structured to clarify group objectives and assist individuals in clarifyig personal values. Before any group progress can be made, there must be a common sensitivity to the problem and an understanding of individual values. By recognizing the dynamics of a group, public participation coordinators will enhance communication between members, establish cohesiveness, and better reach mutually acceptable decisions.

Several examples of behaviors that will enhance communication have been extracted from the Keys to Community Involvement (Learning Resource #12* and Learning Resource #13**). This series of booklets was developed for government boards, community leaders, group members, administrators, and citizens. The booklets are adapted from a more comprehensive set of materials and training activities developed and field tested by the Northwest Regional Educational Laboratories. Information about the series and other services and activities can be obtained from the National School Public Relations Association.

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*Learning Resource #12, "Effective Groups: Guidelines for Participants," Keys to Community Involvement. National School Public Relations Association, 1801 North Moore Street, Alington, VA 22209.

**Learning Resource #13, "Group Processes: Recognizing and Removing Barriers," Keys to Community Involvement. National School Public Relations Association, 1801 North Moore Street, Arlington, VA 22209.

BEHAVIORIAL DO'S AND DON'TS

What is it that makes some groups fun as well as productive? This section examines individual behaviors that help create a positive, pleasant group climate. The material is covered in four parts: Communication Skills, Speaking for Yourself, Dealing with Differences, and Developing and Maintaining Openness."

COMMUNICATION SKILLS

The following skills are neither new nor unique--many people use them spontaneously when interacting with others. Used by themselves these skills do not assure increased clarity of communication. In fact, if they are used inappropriately, they can arouse antagonism and obstruct communication. If, however, you have a genuine desire to understand another person, these communication skills can help you and others in overcoming many problems in the communication process.

1. Paraphrasing. Paraphrasing is a way of checking with the other person to be sure that you understand an idea or suggestion the way it is intended. To clarify meaning, restate in your own words what you heard another person say.

   Use diplomacy when you paraphrase. Don't tell someone, "What you mean is..." or "What you are trying to say is...." Rather, say, "I hear you saying..." or "Do you mean...?" and then supply the paraphrase. If the speaker has been misunderstood, he or she can provide additional

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information to clarify the intended meaning. In addition, paraphrasing allows the listener to convey his or her interest in the other person's idea.

2. Sharing Information. Helpful information allows a positive response from the group. Such information can take the following form:

Communication Skills	Description	Example
Behavior Description	Reports specific observable behavior without judgment or evaluation	"When I was in the middle of my sentence, you cut in."
Perception Check	Describes your interpretation of the other's feelings	"I see you shaking your head as if you're confused. Was my last point clear?"
Describing Personal Feelings	Provides others with accurate information about your own emotional state	"I feel pleased with our progress." "I feel upset by the delay."

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Communication that the group cannot act on is generally not helpful.

Examples of Unhelpful Information

"You never pay any attention"	judgment
"You're foolish"	name-calling
"You just want to put people down"	accusation
"Stop talking so much"	command
"Oh, yeah, that's a great idea" (when the opposite is meant)	sarcasm

Generally, a message that begins with "you" will not be as effective as an "I" message. With an "I" message, you take responsibility for your own feelings, perceptions or ideas, and preserve the other person's self-esteem.

SPEAKING FOR YOURSELF

1. Take responsibility for words and deeds. A lot depends on how you say and do things. If you say "I can't," you're probably not taking as much responsibility as when you say "I won't." In productive, successful groups, individuals tend to accept responsibility for what they do and don't do and for what they say or choose not to say.

2. Make statements. Some people have turned inquiry into inquisition. Questions are sometimes a subtle form of aggression. Questions like "Why are you

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late?" or "Where did you get your information?" are likely to put another person on the defensive. It is generally less offensive to make statements instead of asking questions. Rather than putting someone else on the spot, share the information that is available to you. For example, statements like "I wish you had been here earlier for the report" or "I'm confused and skeptical about the information you presented and curious to know your source" speak clearly of what's going on for you and allow the other person to respond without needing to defend.

3. Stay in the "Here and Now." Talking about the past or future can be a camouflage for present, but thorny, issues. "Here and Now" behaviors include talking directly to persons, saying what is on your mind and reporting about what is going on right now. For example, complaining about the bind you're in because the past president didn't do the work he or she was supposed to do won't help you get the job done. Talking about concrete behaviors or plans that you can influence will more likely lead to an effective group.

4. Share feedback. In successful groups, members readily share how they perceive others' ideas and actions. They express what's true for themselves rather than talking for or about others. They ask for and offer information directly, rather than expressing their feelings later to an irrelevant third party. Going home from a meeting and ranting to your husband or wife about some group member's behavior is of no assistance to improving the group.

5. Realize that timing is important. Share your reactions to a behavior as soon after the behavior as you can so that others will know what you're

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talking about. For example, if you think the group's effectiveness is hampered by straying off the agenda, the time to call it to the group's attention is when you first become aware of it or during the evaluation time at the end of the meeting. It does not serve you or the group well to withhold the information, complain about it outside the group or, after collecting all kinds of grievances, blow up. Deal with an issue as soon as possible.

DEALING WITH DIFFERENCES

1. Treat other group members as you would like to be treated. Behave the way you wish others to behave—it's frequently much more effective than telling others how to behave. After all, telling people how to act may be exactly what you don't want them to do to you!

2. Create a climate in which differences are accepted. Nothing is further from the truth than the notion that for a group to be effective, everyone should think the same thoughts and hold the same values. The success of any group depends on variety, freshness of insight and originality. Respect for differences of opinion is an important sign of a healthy group.

3. Maintain two-way communication. No matter what you do, don't cut off the possibility of someone responding to you. Successful groups maintain perpetual interchange. Information flow among members is essential to productive groups. Find ways to regularly share even the controversial or potentially upsetting information. Keep communication channels open.

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4. *Practice tolerance*. *You* are the only person *you* can change. Don't attempt to "make" others change. A person with a tolerant attitude doesn't look for who's right or wrong but asks, "What can I learn from this situation to give me a more complete picture of reality?"

5. *Avoid interpreting others' behavior*. We tend to interpret the behavior and motives of another person in the light of our own situation. We project feelings about ourselves to other people.

   One way to test your interpretations to see whether they are indeed projections is to ask, "What is it about me that I see reflected in this person that I like or dislike."

DEVELOPING AND MAINTAINING OPENNESS

1. *Be authentic*. Act the way you really feel instead of the way you think others *expect* you to act; it helps a group function more effectively. Not only that, it also makes you feel better about yourself. After all, you may be wrong about the way you think people expect you to act.

2. *Be aware of body language*. Think about your body movements while you are in a group. Do they reinforce or contradict what you are saying? Can you read the intentions of others by the way they sit or gesture?

3. *Make eye contact*. Looking a person in the eye and talking directly to him or her enhances communication immensely. If you are speaking to a number of people, try to maintain eye contact with many or all of them.

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4. Accept challenges. A good assumption is that you are capable of more than you think you are. The only way to discover that this is true is to take a chance and learn from your actions. You rarely receive a maximum return with minimum risk. Be willing to risk a little in order to gain.

5. Deal with anxiety. Anxiety is perfectly normal in any new situation. Simply being aware that it is a human response to the unknown can make it easier to deal with. It often comes from excitement or anticipation and from being unable to predict exactly what's going to happen. Often a person will feel nervous before standing up to give a group report, but the nervousness disappears once he or she gets into the body of the report. Anxiety frequently diminishes when you take action.

6. Offer assistance...don't smother. As a rule, don't be too helpful to others. This is not to say people shouldn't be considerate, concerned or available. But group work proceeds best when all members are utilizing their full potential. As a general rule, don't do for others what they could do for themselves.

The first section discussed the three personal needs of inclusion, control and affection. The second section gave guidelines for communication skills, speaking for yourself, dealing with differences and maintaining openness. This section briefly describes four stages of small group development and suggests ways you can assist the group to operate effectively. For information about group development from the leader's point of view, see Booklet 15, "Group Leadership: Understanding, Guiding and Sharing." As you read this section, keep in mind the guidelines presented in the first and second sections.

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PATTERNS OF FORMATION[2]

Groups go through stages just like people do. In simple language, the stages of a group are forming, storming, norming and performing. Each stage presents a challenge to successful group interaction, and these challenges are normal and necessary.

The stages, characteristics and things you can do are identified in the chart below.

Stage	Characteristics	What You Can Do
Forming	● People feel dependent on leader or others ● Task is unclear	1. Share information about ● why you're in the group ● what you hope to accomplish ● how you hope to work together 2. Assist the leader in providing structure
Storming	● Conflict develops among members, often with the leader ● Disagreement exists about what is to be done and how to do it	1. Practice paraphrasing and "I" messages 2. Help determine work rules, leadership, reward system and responsibility 3. Stick in there when the going gets tough

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Stage	Characteristics	What You Can Do
Norming	• Cohesive interpersonal relations develop	1. Point out group norms
	• Information flows	2. Participate in giving and receiving feedback
	• Work proceeds on tasks	3. Enjoy the feeling of having finally "gotten together"
Performing	• Interdependent relationships develop	1. Support creativity and openness
	• Creativity is evident	2. Collaborate with others
	• Productive work gets done	3. Engage in problem solving

SUMMARY

In this booklet, ideas about individual needs and behaviors were presented. The individual is seen as the cornerstone of the group. Each individual has a unique contribution to make to a group. Inclusion, control and affection are needs everyone brings to a group in varying degrees. It's important for group members to achieve the degree of inclusion, power and affection that is personally satisfactory to them. Once these needs are taken care of, group members can turn their full energies to completing the work of the group.

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The booklet presented a number of behavioral do's and don'ts, guidelines for individual behavior when participating in a group. These guidelines were organized according to communication skills, speaking for yourself, dealing with differences and maintaining openness.

In the final section, stages of group development were discussed, characteristics of each stage outlined and some suggestions presented for what the individual group member can do to assist the group during the forming, storming, norming and performing stages.

As a group member, you can make a significant difference in the climate and functioning of the group. It takes your interest and commitment to make the group effective, productive and satisfying.

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PROBLEM SITUATIONS AND HOW TO HANDLE THEM

MEMBERS ARE RELUCTANT TO ASSUME RESPONSIBILITY FOR TASKS

Most groups are organized to accomplish tasks. For example, a citizens group may be established to help the school board identify, plan and carry out school improvement projects. Or a temporary task force might be set up to plan a staff retreat.

Getting the work done depends on the willingness of members either to do the work themselves or to assume the responsibility for getting work done by coordinating and delegating specific tasks to others.

Sometimes a group may be faced with plenty of work but few members who want to do it. There may be many reasons for this, including:

- Members don't feel committed to the tasks
- Members feel they will fail or won't do the work "right"
- Tasks seem vague and confusing
- Members don't think there are adequate resources--people, time or money--to successfully complete the tasks

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If your group realizes it is facing this kind of situation, try the following activities to identify more clearly what is causing the situation and how to resolve it.

A. Review the purpose and goals of the group. Some members may not see the relationship between the work that is to be done and the reason they joined the group. Reviewing the purpose and goals of the group may help clarify the relationship and increase motivation for doing the work.

B. List the tasks on a chalkboard or newsprint so all members can see them. Clearly listing what is to be done and breaking the work down into small, manageable tasks frequently helps reduce members' confusion and anxiety about what is to be done and who is responsible for doing it. Also, if members feel unsure about their abilities to accomplish the tasks, listing the tasks may help members select the ones they feel confident about doing.

C. Surface concerns. By taking time to periodically identify and deal with members' concerns and questions, a group can eliminate some of the blocks that may be preventing them from getting their work done. A simple procedure for surfacing concerns is for each member to list on a card or slip of paper any concerns or questions about the group's work. Then, in small groups (three to four people; meeting in small groups gives shy members a greater opportunity to voice their concerns) members can share their concerns and questions, record them on newsprint and post the newsprint sheets for the entire group to read. The convener or leader of the group then helps the group address each item. Some concerns may be dissolved by a member sharing some new information; other items may require that the group make a decision or do some additional problem solving. (See Booklet 3, "Problem Solving: A Five-Step Model.") After members' concerns have been dealt with, review the tasks and agree upon task assignments.

ATTENDANCE IS DECLINING

When a group is first organized, members are usually excited and enthusiastic about the group and its goals. Their attendance is regular and participation is lively. After a time, however, members' interest and enthusiasm may wane and attendance decline. When members first show signs of indifference or disinterest, deal with it then, not after a number have already dropped out or relationships among members have severely deteriorated.

Apathy or disinterest among members can be the result of a number of things, including:

- Members may feel unwanted or not included in the group
- Members may be unhappy or disgruntled with the way the group operates; e.g., the pace is too slow or fast, or decision-making procedures seem unclear or inconsistent
- Members may feel powerless to influence final decisions
- Members may have lost interest in what the group is doing
- Members' individual goals are in conflict with what the group has outlined as its goals

There are a number of ways to identify and deal with members' apathy. One way to pinpoint some trouble spots is for members to complete the following questionnaire.

Sample Questionnaire

GROUP ASSESSMENT FORM

Directions: Below are some statements regarding your group. Please give your opinion about the items by circling the appropriate number and responding in your own words.

1 = Strongly agree
2 = Agree
3 = Undecided
4 = Disagree
5 = Strongly disagree

	About the group	SA	A	U	D	SD
1.	Members get along with one another	1	2	3	4	5
2.	Members openly share their ideas and feelings	1	2	3	4	5
3.	Important decisions are made reasonably and quickly	1	2	3	4	5
4.	Problems are diagnosed and resolved in a systematic way	1	2	3	4	5
5.	Members seem enthusiastic and interested about accomplishing tasks	1	2	3	4	5
6.	Meetings are productive and efficient	1	2	3	4	5
7.	The relationship between the group's goals and tasks is clear	1	2	3	4	5
8.	The group has norms or standards that are clear and generally accepted by members	1	2	3	4	5

9. What aspects about your group do you consider most satisfying?

10. What aspects about your group do you consider least satisfying?

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About myself		SA	A	U	D	SD
1.	I understand the purpose and know what the agenda is for our meetings	1	2	3	4	5
2.	I am generally friendly and supportive of other members	1	2	3	4	5
3.	I have adequate opportunities to share my ideas and opinions with others	1	2	3	4	5
4.	I feel I am a valuable member of this group	1	2	3	4	5
5.	I clearly understand and feel committed to the work and tasks of this group	1	2	3	4	5
6.	I am satisfied with the amount of influence I have on what happens in this group	1	2	3	4	5
7.	I am able to influence and participate in making group decisions	1	2	3	4	5
8.	I am satisfied with the type of leadership provided by our convenor	1	2	3	4	5

9. What aspects about your participation or influence in the group do you consider most satisfying?

10. What aspects about your participation or influence in the group do you consider least satisfying?

Figure 1. Sample Group Assessment Form

Once all members have completed the questionnaire, the leader or a member can compile the data and present it to the group. A discussion of the data may indicate potential problem areas or conflicts that members may want to work on.

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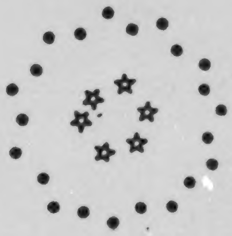
The fishbowl is another technique that can be used to encourage members to talk about and examine some possible causes of apathy or dissatisfaction. In the fishbowl, a small group is formed within an enclosing circle by the full group.



The small group is then asked to discuss a question, such as "Several people have complained that our meetings are boring. What are we doing or not doing that is causing people to feel bored?" One or two empty chairs can be available in the inside circle for observers to join the activity on a temporary, rotating basis--to make a comment, ask for a point to be clarified, offer additional information and so on. The fishbowl is a way to get members talking and listening to one another when they are faced with a problem.

Pep talks and other similar techniques may have some short-term effects but are not generally satisfactory ways to deal with group indifference. Such techniques address symptoms rather than causes.

It is easier to prevent enthusiasm and interest from waning than it is to recapture group morale once it has begun to deteriorate.

Use of the following procedures may help prevent this problem.

A. At the beginning of each meeting, state the purpose of the meeting and review the agenda. Give members an opportunity to modify or add to the purpose and agenda.

B. Periodically surface any questions or concerns that members might have--and deal with them as soon as possible.

C. Keep meetings fun and active. Group work doesn't have to be hard and agonizing to be effective.

D. Encourage all members to be involved and to participate in the activities. Communicate to each member that his or her involvement is important to the group.

UNPRODUCTIVE, TIME CONSUMING MEETINGS

Most group members are busy people who have little time to waste, particularly for meetings. They usually come to meetings to get something done. When meetings begin to run overtime regularly or people feel that little is being accomplished, members frequently become frustrated and angry.

Unproductive meetings can be the result of several factors:

- No agenda or plan for the meeting
- Long, rambling discussions
- Inability of the group to make decisions or reach agreements

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- Too many activities are planned for the time available

- Recurring conflict or disagreement among members

Since it is more efficient to prevent meetings from becoming unproductive than to cure the malady once it occurs, three procedures can be used to help keep meetings flowing and productive:

A. Establish an agenda for each meeting. It serves as an effective tool for:

   - Identifying issues to be covered

   - Checking progress throughout a meeting

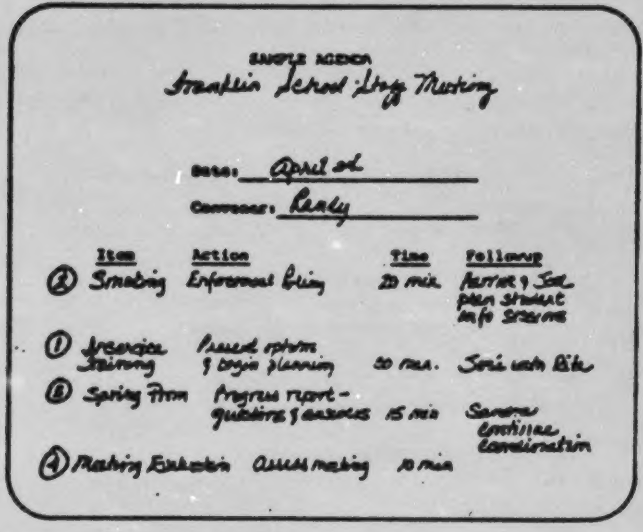
   - Keeping a record of what was done

   - Insuring followup on each item discussed

   At the beginning of a meeting, present the agenda and have members review it. Go over the agenda to make sure everyone understands each item. Check to see if any important items of business have been omitted or need to be added. Next, determine the top priority items and number them accordingly. Finally, estimate the amount of time each item will require.

   Items on the agenda are likely to be varied--some will involve sharing information, others will involve identifying problems, seeking solutions, pooling ideas and assigning responsibilities. An item that calls for a decision or resolution will probably take longer than one designed merely to provide information. Review the time estimates and determine the length of the entire meeting.

The sample form below shows how one group developed its agenda. If necessary, modify the sample to fit the needs of your group.



SAMPLE AGENDA
Franklin School Staff Meeting

Date: April 3d

Convener: Renly

Item	Action	Time	Followup
② Smoking	Enforcement Policy	20 min	Parrot & Joe plan student info sessions
① Inservice Training	Present options & begin planning	30 min.	Sue with Rita
③ Spring Prom	Progress report - questions & answers	15 min	Science Committee coordination
④ Meeting Evaluation	Assess meeting	10 min	

As the meeting progresses, have a recorder or secretary keep track of followup steps. Use the followup column on the Sample Agenda to record who is taking responsibility for an item and what the plan of action is. If policy is generated, state what it is.

B. Keep discussions moving and on target. All members--not just the group leader--are responsible for the conduct as well as the quality of the discussion. Each member can help keep discussions purposeful and productive by:

- Monitoring the discussion and informing the group when it strays from the item at hand
- Attempting to prevent one or two participants from dominating the discussion
- Asking people to clarify what is being discussed in order to be sure that everyone understands one another
- Drawing all participants into the discussion by frequently soliciting opinions and information from everyone concerned
- Helping the group use agreed-upon procedures, e.g., each member, in turn, shares his or her position and then the issue is open for 10 minutes of general discussion
- Occasionally verifying that group members are satisfied with their decisions and the way they are being made
- Bringing out all sides of the topic to insure that the group has considered all aspects before a decision is made.

At the close of a discussion, check to be sure that everyone who wanted to participate has had a chance to do so.

c. Clarify pending decisions and decision-making procedures. Groups make a lot of decisions--some minor and some that are more significant. Members can help prevent the group from getting bogged down when they have decisions to make by:

- Paraphrasing or stating the proposed decision that is before the group: "It has been proposed that we adopt the Distar Reading Program for all the district's elementary schools."
- Stating the procedure that is going to be used to make the decision--consensus, majority vote, etc.
- Restating the decision after it has been made, testing to make sure all members understand it and outlining the next steps to implement the decision.

LACK OF FOLLOWUP ON DECISIONS

Sometimes a group makes its decisions with ease; they are made quickly and with few objections or questions from members. Occasionally, however, the time comes--or passes--for the decisions to be implemented, and nothing happens.

Several reasons might be the root of this problem situation. For example:

- Members fear or are unsure about the consequences of a decision
- Members feel the decision is unimportant or insignificant

- Members don't feel they've been appropriately included in making the decision and, therefore, lack the commitment for carrying it out

- Members don't understand how to implement the decision; they don't know what to do first, second and so on

The key to turning this situation around is communication. In order to determine what is blocking implementation and what can be done to remove the blocks, members must be willing to deal openly with the problem.

One method, called force-field analysis, can be used to identify the conditions that support and those that block implementation of a decision.

Use the following steps to conduct a force-field analysis:[1]

A. Clearly state the goal or desired situation; in this case it would be the decision that is to be implemented.

B. Identify the situation "as it is."

C. Brainstorm the forces which support goal attainment.

D. Brainstorm the forces which prevent you from changing the present situation.

E. List the blocking forces in order of the most significant obstacles.

F. Brainstorm possible solutions to this prioritized list of obstacles.

G. Create an action plan based on the solutions generated.

SAMPLE FORCE-FIELD ANALYSIS

A. Statement of the Goal:	To plan a staff retreat
B. The Situation:	Nothing has been started (and the decision was made two weeks ago)
C. Forces For ● The retreat was a consensus decision ● There are some important issues that must be dealt with by the staff ● There is money in the budget to cover staff time for planning	D. Forces Against ● Work pressures limit planning time ● Few people seem interested in serving on the planning committee ● No one seems to know what the planning tasks are
E. Prioritize Forces Against:	1. No one seems to know what the planning tasks are 2. Work pressures limit planning time 3. Few people seem interested in serving on the planning committee
F. Possible Solutions:	Have someone who worked on last year's retreat committee help this new committee get started
G. Develop an Action Plan:	In order to clarify planning tasks for the staff retreat, we will (1) use last year's retreat program as a guide, and (2) ask Joan, a member of last year's staff retreat committee, to help us outline major tasks

Figure 2. Sample Force-Field Analysis

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Once a decision has been made, the following steps may help to ensure that the decision will be carried out.

- Identify some action steps to get some work or activities started.

- Decide who will carry out specific action steps.

- Set a time when a progress report will be made to the entire group.

DISCUSSIONS ARE DOMINATED BY A FEW MEMBERS

Much of the business and work of a group is accomplished through oral exchanges or discussions among members. And since some people are naturally more vocal than others, it is inevitable that a few will have more "air time" during meetings than others. For some groups this may not be a problem, as the more silent members may feel quite comfortable communicating many of their ideas and opinions on an informal basis--during coffee breaks, over the telephone between meetings, or in brief hallway conversations.

However, members who do dominate group discussions may not be aware of the needs of others nor of the impact of their domineering behavior which may result in the following:

- Pertinent ideas or information, important for a decision, may not be stated

- A tense, combative atmosphere may emerge

- Less assertive members begin to feel expendable and unimportant and may eventually quit the group

- Members may not be able to express genuine support for good ideas or offer constructive criticism

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When it becomes obvious that discussions in which only a few are participating have become dysfunctional to the group, you can suggest using one of the following procedures.

A. High talker tapout. The primary purpose of the "high talker tapout" is to prevent discussion being dominated by any one person in a group and to allow all members to actively participate during a meeting.

To carry out this activity, someone needs to be designated as a monitor. The monitor watches to see if anyone seems to be dominating--if two or three people seem to be doing all the talking or if certain members have exceeded the number of minutes that were designated for stating one's opinions.

The next step is for the monitor to notify the "high talker." This can be done in a number of ways. One way is to hand the person a card with directions on it, i.e., "Please refrain from making any further comments until the group moves on to a new topic or agenda item," or "Please refrain from making any further comments for five minutes. I'll tap you on the shoulder when your time is up." Taking another approach, the monitor can place a token in front of a high talker--this might signify to stop talking for a certain period of time or until everyone in the group has contributed to the discussion at hand.

When using this activity, it is important that the group understands the role of the monitor and what a high talker is to do (or not to do) once notified by the monitor.

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B. Buzz groups. This is another technique to broaden participation and discussion. Small groups of three to five members are formed to discuss the concern or topic at hand. After a short period of time (two to five minutes) a member of each buzz group is asked to summarize the ideas and opinions expressed during the buzz group session and report these to the large group.

C. Surveying or polling members. In the midst of a discussion or before a decision is made, someone can request each member to indicate where he or she stands on the issue or proposal that is before the group. For example, a member might say, "I'd like to survey the group on this matter. The proposal is to hire Mrs. Alma Baker as head teacher of our elementary school. Alan, how do you feel about the proposal?" Each member in turn states his/her position. Members' statements can be as brief as "I support the proposal" or "I don't support it," or members may elaborate--"At this point I won't support the proposal for these reasons...," or "I have some questions I want to ask before I can decide one way or the other." This technique gives each member an opportunity to share his or her opinion and indicates whether or not the ideas and opinions of vocal members are representative of the rest of the group.

CONFLICTS AMONG GROUP MEMBERS

Conflicts in groups are inevitable. Each member has goals, aspirations, needs and expectations that differ--some slightly and some more significantly--from all other members. As long as these differences exist, conflict will occur.

Unfortunately, most people tend to think of conflict as negative--something that should be avoided or quickly eliminated if it does occur. But conflict has its positive side too: it can be a source of new ideas or creative solutions to tough problems.

Conflict may stem from many sources. Some of the more typical ones include:

- Value Differences. Conflict situations can emerge when members have basic differences in beliefs, attitudes and values. For example, suppose a local land-use planning group has to decide how 40 acres of land just outside the community should be zoned. It is likely that conflict will occur if some members value protection of prime agricultural land while others value industrial growth.
- Goal Differences. In some groups serious conflicts are created by divergent--and sometimes incompatible--goals among members. For example, the staff in a small company is trying to decide how to allocate some additional money that has become available. One manager wants to use the money to buy more efficient equipment to boost production and, subsequently, sales and profits. However, another manager wants to use the money to hire an engineer to improve the quality of the product which would ultimately cut costs and reduce the return of faulty items. The managers' goals at this level are incompatible, and both have made assumptions about the goals of the other person as well as the goals of the company.
- Role Pressures. In every group, particularly in work settings, members take on different roles and are expected to carry out certain kinds of activities. However, when expectations are unclear or are not commonly understood, the stage

is set for various kinds of role conflicts. For example, if a member expects the chairperson to make all final decisions and the chairperson sees decision making as the responsibility of the entire group, their role expectations differ and are in conflict.

- Perceptual Differences. Differences in how things are viewed develop because every person sees and experiences other people, events and things in a unique way. Past experiences, values and emotions act as a personal viewing screen for filtering all elements of a situation. Conflict that results from a perceptual difference is illustrated in the following example:

  Teacher: Your assignment is two days late and I am very unhappy. Why can't you get things in on time?

  Student: I wanted to do the best job and I didn't think an extra couple of days would matter—it doesn't make any difference to my other teachers.

Identifying the source of conflict can be extremely helpful when you're trying to resolve it. And once a conflict does surface, it's important to deal with it rather than avoid it. Otherwise feelings will likely fester and evolve into more dramatic conflicts or eventually cripple the group.

It should be re-emphasized that conflict is not necessarily bad. Disagreements and differences can be constructive; if members are willing to explore their differences, a clearer understanding of the problem as well as mutually satisfying and creative ways to resolve it may result.

Ways of dealing with conflict vary from person to person, situation to situation. Typically, however, people attempt to resolve conflicts by using a win-lose approach. But other methods, such as negotiating and collaborating, can also be quite effective. Each of these three methods is described below.[2]

A. Win-Lose. The win-lose approach is a struggle for one person or party to succeed, dominate or win over another. Voting, competing and fighting are all forms of a win-lose approach. In situations where there are strong differences between members' goals or values or it's a matter of the one best way, win-lose may be the only feasible approach. However, it can have some extremely adverse consequences. For example, it can lower trust among members and jeopardize group effectiveness in a number of ways--cliques may develop between the "winners" and the "losers"; open communication may diminish; or cooperation may decline among members that usually have to depend on one another.

B. Negotiating. This approach involves bargaining or compromising. Two--and sometimes more--parties discuss and trade different goals, needs and demands until a final agreement is reached. Each person or party tries to make some concessions without giving up too much of what is important. To negotiate successfully, certain elements must be present in the situation:[3]

- both parties believe they will benefit from the outcome
- each side believes the other will keep the bargain
- neither side can force the other to comply unwillingly

- each party is willing to propose ideas and work toward a solution that is acceptable to both parties

- each understands some of the constraints the other operates under

Negotiating enables you to look at alternative solutions to the conflict and work toward a resolution that maximizes the gains while minimizing the losses for all concerned.

C. Collaborating. This approach involves finding a solution that satisfies the needs and interests of all concerned parties equally well. In collaborating, people join together to share information about the underlying issue or problem, to search for common goals and needs and to seek a solution that will be mutually satisfying. The key question is, "Can we find a solution that we both accept?" not, "Who can find the best solution?"

Resolving conflicts in a collaborative manner requires a high degree of trust, open communication, and a willingness to explore ideas outside the boundaries of the conflict and people's own interests.

The disadvantages of collaborating are primarily the amount of time it takes and the energy required to build trust and explore various options.

Each of these methods for resolving conflict can incorporate systematic problem-solving procedures. The figure that follows illustrates how this can be done.

Figure 1. Resolving Conflict Using a Problem-Solving Approach

Resolving Conflict Using a Problem-Solving Approach[4]

Problem-Solving Stage	Approach to Resolving Conflict		
	Collaborating	Negotiating	Win-Lose
Focusing on the Problem	Conflict is due to misunderstanding, lack of complete information or a less than complete picture of the interest of both or all parties. Both parties join together to share information on the "problem."	Conflict is due to diverse and/or incompatible needs and values. Separately, each party examines his or her own and others' self-interests, values, needs, resources and likely approaches to the "problem."	Conflict is based on right vs. wrong or a matter of deciding one best way. Separately, each party looks at his or her own and others' strengths and weaknesses.
Searching for Alternatives	Brainstorming and other procedures are used to generate alternatives; the feasibility of identified alternatives is examined.	Different strategies are examined and one or more that seem appropriate are selected.	Different strategies are examined and the one that seems best is selected.
Planning for Action	Information about alternatives is analyzed and shared among all concerned.	Strategies are developed, the case is prepared and resources are mobilized.	The game plan is developed and practiced and resources are mobilized.
Carrying Out the Plan	Full discussion is held using all the available information; decisions are made by consensus and carried out with personal commitment for the decisions.	Parties participate in negotiations, bargaining and compromise. Each party follows through on agreements, with a monitoring process to assure compliance.	The game is played--competing, coercing, contesting, fighting. The victor's plans and decisions are carried out.
Assessing the Results	Information is shared on the adequacy of the outcomes and the procedures used to achieve the goals.	Information is shared on the adequacy of the outcomes and the process to meet self-interests. The situation is periodically reassessed.	Outcomes are compared with the original goals. The procedures to improve or to determine how to win next time are reviewed.

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Some conflict situations may take a long time to work through, while other, momentary misunderstandings, may be resolved in a few minutes. However, in either case, for a group to remain an effective working body, it needs to recognize four things:

- Conflicts do occur and are legitimate.
- Individuals and groups may differ without one party being entirely right or entirely wrong.
- Conflict rarely goes away by itself. By recognizing and surfacing the conflict, participants have a greater chance of resolving issues.
- Conflict is manageable and can be dealt with.

CONCLUSION

The barriers described in this booklet are some of the more common and critical situations that can slow or bring group progress to a halt. But they can be dealt with successfully and eliminated by applying some of the suggested approaches. And the approaches described in this booklet are only a sample--you may want to modify and adapt them, generate some of your own or try others that are described in a number of other pamphlets and books listed in the bibliography.

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ESTABLISHING ADVISORY GROUPS

Advisory committees, working groups, task forces, citizens committee--whatever they are called--can be an important element in a successful public involvement program. On the other hand, if poorly established, they can be a source of continuous frustration both for the agency and the members of the group. Experiences with advisory groups in Water and Power Resources Service public involvement programs have ranged from excellent to extremely frustrating. This chapter attempts to identify some guidelines to ensuring the productivity of any advisory groups.

> Legal Restrictions on Advisory Groups: The term "advisory committee" as used within WPRS may mean many kinds of groups including task forces, working groups, blue ribbon committees, etc. Within the larger context of government it has a somewhat more precise and different meaning. Over the years a number of formal advisory committees or panels were established to provide counsel to the President or Secretaries of the departments. Most of these committees were permanent committees, with membership a political honor requiring appointment by either the President or Secretary.
>
> Over time these committees became so cumbersome and ingrown that most of them were finally abolished by Presidential Order. This order also precluded the establishment of new advisory committees. Further interpretation of this order by the departments indicates that this order does not apply to an advisory group related to a specific decision-making process or planning study. The distinction would become much fuzzier if a Project Office or Regional Office had some kind of standing permanent advisory groups, and it may avoid some potential confusion by avoiding the specific phrase "advisory committee," using substitute phrases such as advisory group, citizens committee, citizens working group, etc.

WHY ESTABLISH AN ADVISORY GROUP?

The first question to be answered is what purpose can advisory groups serve that are not just as adequately served by public meetings, etc.? The value of an advisory group is to establish a group representing the full range of opinion in a forum which allows for thorough education of the participants, detailed discussion of issues, and informal dialogue rather than "official" positions of groups. Because of these characteristics, advisory groups can assist in a number of important ways. These include:

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*Learning Resource #14: from James L. Creighton, Public Involvement Manual: Involving the Public in Water and Power Resources Decisions, Water and Power Resources Service.

- Help set study priorities or assist in "scoping" an environmental impact statement.

- Review technical data and make recommendations on its adequacy.

- Help resolve conflicts between various interests.

- Help in the design and evaluation of the public involvement program.

- Serve as a communication link to other groups and agencies and bring reactions back to the agency.

- Review and make recommendations on the decision-making process.

- Assist in developing and evaluating alternatives.

- Help select consultants and review contracts.

- Review and make recommendations on the study budget.

- Review written material prior to release to the general public.

- Help host and participate in public meetings.

- Assist in educating the public about the proposed action and the decision-making process.

WHAT AN ADVISORY GROUP CANNOT DO

An advisory group cannot substitute for review of a proposed action by the general public. The public has not created the advisory group, nor granted it the authority to act for it. On the other hand a consensus within a representative advisory board may be persuasive to the broader public, and it may be willing to follow an advisory committee's recommendation.

As a general rule, however, public involvement programs should be designed in such a way that periods of time during which the agency works closely with an advisory group should be followed by opportunities for review of their endeavors by the general public.

PROBLEMS WITH ADVISORY GROUPS

There are two major problems that have occurred with advisory groups: 1) Conflicts over the advisory group's role in decision-making, and 2) advisory committees becoming a new elite unrepresentative of their constituency.

Role in Decision-making: By the time advisory group members have spent many hours in meetings, often participating in discussions about all aspects of the study, they will develop a strong sense of "ownership" or vested interest in the outcome. Even when it has been stated in the beginning that the group's role was only advisory, there is inevitable frustration if a decision is made by the agency which is substantially at odds with the advisory group. In addition, the advisory group serves as a forum for people who are unhappy with a decision to appeal to allies, with the implicit threat of advisory group opposition to a proposed action. While this has no legal basis, the reality is that if community agreement is necessary to implement an action, then just as the recommendation of the advisory group for an action can help convince the community of its desirability, the overt opposition of an advisory group can make community agreement virtually impossible. There are political realities as well as legal realities, and the political reality is that, once an advisory group is established, decisions made in the face of advisory group consensus may be difficult to implement, even though the agency has the legal right to make the decision.

Becoming a New Elite: One of the principal advantages of working with an advisory group is the opportunity for advisory group members to become fully educated about the proposed actions. Also, as individuals have to deal across the table with individuals with opposing views, there is a tendency for views to become more moderate.

However, there are often two unfortunate effects which result from increased education and exposure to other points of view.

The first is that often advisory groups rather quickly become elitist in their own views and not infrequently believe that certain decisions need not be taken to the general public who, they argue, wouldn't be sufficiently well educated to deal with the issue anyway. This is, of course, ironic since it is a view often ascribed to government employees.

The second effect of increased education and exposure is that the views of the advisory group members often become unrepresentative of the groups and interests they supposedly represent. The advisory group members are having to talk with representatives of other groups and receiving a great deal of new information, while their constituents tend to be talking only to each other, reinforcing their existing views. The result is that the views of advisory group members often evolve away from the views of their constituency. Rather than viewing this as a natural progression, the constituencies tend to view this as "selling out." As a result it is imperative, as indicated below, to develop methods of communication between advisory group members and their constituencies both so advisory group members "keep in touch" with their constituencies' views, and also a "bring their constituencies along" with any new ideas that could lead to consensus among the various constituencies.

GENERAL PRINCIPLES IN ESTABLISHING ADVISORY GROUPS

1. Advisory groups must be representative of the full range of interests and values of the interested publics. An advisory group that only represents interests that have been traditionally supportive of Water and Power Resources Service activities is misleading to the agency, and undermines the credibility of the entire public involvement effort. To be effective, advisory groups must provide representation for all groups which see themselves potentially affected by the proposed action. This includes not only groups affected by economics or use, but also groups concerned philosophically about the manner in which natural resources are being managed.

2. Clearly define the group's role in decision-making. As indicated above, confusion about the role of advisory groups --coupled with a natural inclination of advisory group members to want to have maximum influence on the outcome--is one of the major sources of problems with advisory groups. While the potential for difficulty can never be totally eliminated, the chances of confusion or eventual feelings of betrayal can be substantially eliminated if there is an open and candid discussion of the group's role in decision-making at the beginning of the process. One agency even goes so far as to develop a kind of "contract" with advisory groups, spelling out the limits of the group's authority on paper. It is also extremely helpful to spell out to the group what some of the countervailing pressures and limits are upon WPRS. Everybody works within limits and when these are understood they can be dealt with openly. The greatest risk of all is to create an unrealistic impression of the scope of the advisory group, creating a greater sense of betrayal than if there had been clearly defined limits in the first place.

3. The life of the group should be limited. The longer that a group is in existence, the more likely it is that the members of the group become unrepresentative of their constituencies and instead become a new kind of elite. As a result it is important to establish from the beginning what the life of the group will be. Typically, the life of the group coincides with the duration of the decision-making process or study.

4. Efforts should be made to ensure that members of advisory groups maintain regular communication with the constituencies they are supposed to represent. As suggested above,

advisory groups tend over time to become a new kind of elite, and unless the expectation is established from the beginning that one of the duties of advisory group members is to maintain communication with their constituencies, then the membership may become increasingly unrepresentative of the public at large. This communication with their constituencies could take the form of briefings of the groups they represent on study progress, informing their constituencies through their own organizational newsletters, or occasional interviews with other leaders from their constituencies.

TYPES OF ADVISORY GROUPS

The term "advisory groups" covers a wide range of types of groups from blue ribbon panels, standing advisory committees, citizens committees, working groups, task forces, technical advisory groups, etc. An effort is made below to distinguish the major types:

Task Force: A task force is usually organized to work on a specific problem or single objective and exists only for the period of time necessary to complete the task. A task force may be a sub-group or sub-committee of a larger advisory group. To ensure its effective working, task forces are usually limited in size so that they can be an effective working group.

Technical Advisory Committees: The Principles and Standards require the establishment of an inter-agency working group on feasibility studies. It is also not uncommon to establish technical advisory groups on other decisions. Typically technical advisory groups are composed of technical experts from other governmental agencies or interest groups. The function of the technical advisory committee is to evaluate the technical adequacy of the program and review the program of the technical portions of the study. Because of the technical background of its members it should be possible to deal with highly technical problems, and also resolve conflicts between agencies on an informal basis, rather than through critique of an EIS at the end of the decision-making process.

The danger of having both a technical advisory board and a citizen group (usually with some overlapping membership) is that the citizen group often becomes suspicious that the technical group really has more say than it does, relegating the citizens group to second-class status. As a result, it is important to utilize the overlapping memberships as a means of ensuring communication between the two committees and make certain that materials brought to the citizens group have not always been "pre-digested" by the technical advisory group.

MEETING FORMATS

Large-Group Format: There are several categories of large meetings (50-2000 people) which are distinguished from the formal public meeting by less formality and more opportunity for interaction between participants. Some of the formats which are frequently used include:

> Briefing/Question and Answer: This meeting begins with a presentation by agency officials, and/or representatives of other agencies. Following the presentation, time is allowed for questions and answers between the audience and agency representatives.
>
> Town Meeting: The town meeting is another traditional meeting format, with members of the audience discussing and debating to the entire audience. The big difference between the town meeting and a public hearing is the degree of formality, with more interaction allowed between speakers at a town meeting, and fewer procedures. In the town meeting, also, the speakers usually address the audience, rather than agency representatives, although this is not mandatory.
>
> Panel Format: An alternative method of creating interaction is to select a panel of representatives of different viewpoints who discuss an issue from their point of view, followed either by questions from the audience or small group discussions. One variant of the panel format which is usable if there is complex technical information is the "Meet the Press" format. In this format a group of reporters is pre-selected to question the technical experts just as they are in the "Meet the Press" television program. The technical experts will make a brief statement, followed by questions from the reporters, followed in turn either by questions from the audience or small-group discussions. Since reporters are often skilled interviewers, this often serves to identify the critical issues, and communicate the technical information in a way which is relevant to the public.

Large-Group/Small-Group Format: If real discussion is desired, even if the crowd is large, it is possible to break a large crowd into smaller discussion groups which then report back to the larger group at the end of the meeting. A typical format for this kind of meeting would be:

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*Learning Resource #15: from James L. Creighton, Public Involvement Manual: Involving the Public in Water and Power Resources Decisions, Water and Power Resources Service.

a. A thirty-minute presentation describing the technical background of the study and proposing the question to be discussed in the small groups.

b. One to two hours of small-group discussion.

c. Reports from each discussion group on their opinions or findings.

The small-group discussion provides everyone an opportunity to participate intensively and the reports back to the large group give some feeling of what was discussed in each of the other groups.

SMALL-GROUP TECHNIQUES

Several techniques are presented on the next few pages which are useful in stimulating discussion, generating creativity, and producing agreement. There are an almost infinite number of small-group techniques which have been developed over the past few years and appear in the organizational development and human relations literature. The techniques described in this chapter are presented because they have been proven successful in working with the public and do not require unusual group leadership skills.

THE NEED FOR "TECHNIQUES"

The obvious question is: "Why the need for special techniques, can't a group of people just sit around and talk?" Of course they can, particularly if they are friends who share a somewhat similar perspective on an issue. But if the participants are strangers, or if they take opposing sides on an issue then more may be accomplished if some simple techniques are employed.

Some people are very slow to participate with strangers or with people they believe will be very critical of their comments. In addition this climate of discomfort runs counter to the climate of psychological security that is necessary for creativity. Creativity, by its very nature, means trying out new ideas. This requires taking a risk that others may disapprove of the ideas. This is possible for many people only in a group where "permission" is granted to consider new and different ideas. Most people must be comfortable before they will really open up in a group. Since this is difficult to achieve in a group of strangers, or a group with strongly opposing viewpoints, small-group techniques are designed to create the "permission" for people to participate openly and share their creative ideas. These techniques can reduce the period of discomfort and move the group quickly into productive work. In fact, work teams and groups of friends which are supposedly comfortable in working together will often find their effectiveness increased by utilizing these techniques.

NOMINAL GROUP PROCESS

The Nominal Group Process was designed based on research which suggests that individuals generate more creative ideas and information when they work in the presence of each other but do not interact. According to this research, when people interact in groups they are more likely to react to each others ideas rather than come up with new ideas or consider new dimensions of the problem.

The procedure for Nominal Group Process is as follows:

1. OPENING PRESENTATION

   After an initial presentation explaining the Nominal Group Process the audience is broken into small groups of six to nine participants.

2. STAFF AND ADVANCE PREPARATION

   Each group is assigned a Discussion Leader and Recorder. Prior to the meeting these staff persons will put up four sheets of newsprint, and also have felt-tipped pens, scratch paper, pencils, and 3 X 5 cards ready to go.

3. INTRODUCTIONS

   The Discussion Leader will introduce himself/herself and invite everyone in the group to do the same.

4. POSING THE QUESTION

   The Discussion Leader will then present the group with a pre-developed question such as: "What are the water problems in the James River study area which affect you?" The Discussion Leader will write the question at the top of one of the flip chart sheets.

5. GENERATING IDEAS

   Participants are provided with paper or file cards and asked to write on the paper all the answers they can think of to the questions posted. Their notes will not be collected but be for their own use.
   Time: 5-10 minutes.

6. RECORDING IDEAS

   Each person, in turn, is then asked for one idea to be recorded on the newsprint. The idea will be summarized by the Recorder on the newsprint as accurately as possible. No discussion is permitted. Participants are not limited to the ideas they have written down but can share new ideas that have been triggered by others ideas. Anyone can say "PASS" without giving up their turn on the next round. The process continues until everyone is "passing." Alphabetize the ideas on the list: A-Z, AA-ZZ, etc.

7. DISCUSSION

Time is then allowed for discussion of each item, beginning at the top of the list. The discussion should be aimed toward understanding each idea, its importance, or its weaknesses. While people can criticize an idea, it is preferable that they simply make their points and not get into an extended argument. Move rapidly through the list as there is always a tendency to take too long on the first half of the list and then not be able to do justice to the second half.

Time 40-60 minutes.

8. SELECTING FAVORED IDEAS

Each person then picks the ideas that he/she thinks are the most important or best. Instructions should be given to pick a specific number such as the best five or the best eight. These ideas should be written on a slip of paper or 3 X 5 card, one idea per card. They may just want to record the letter of the item on the list (A, F, BB, etc.) or a brief summary, so that they don't have to write out the entire idea.

Time: 5 minutes.

9. RANKED FAVORED IDEAS

Participants then arrange their cards in preferential order with the ones they like the most at the top. If they have been asked to select eight ideas, then have them put an "8" on the most favored and number on down to a "1" on the least favored (the number will change with the number of ideas selected). A score sheet should then be posted which contains all the alphabet letters used in the listing. Then the participants read their ratings ("...R-6, P-2, BB-8...") which are then recorded on the score sheet. When all the scores have been shared, then tally the score for each letter of the alphabet. The highest scoring item can be shown as #1, etc. Post the rankings for the top 5-7 items, depending on where a natural break occurs between high scores and low scores.

Time: 5 minutes.

10. DISCUSSION OF RESULTS

The participants may then want to discuss the results. Someone may point out that two very similar items "split the vote" and were they to be combined they would constitute a single priority item. If the group as a whole wants to combine them, this is acceptable. It should be pointed out, though, that an analysis will be made of all the results, not just the priority items.

Time: 5 minutes.

TOTAL PROCESS TIME: 1-1/2 to 2 hours, plus time for opening presentation.

USES OF NOMINAL GROUP PROCESS

If the full Nominal Group Process is utilized as indicated above, the cumulative time of opening presentation, Nominal Group Process, and reports back to the total group (assuming a larger audience has been broken into small groups) would probably mean a total time of 2-1/2 to 3 hours. This would be the equivalent of an entire evening meeting. It is possible, however, to utilize portions of the process. For example:

- Everyone in an audience can be asked to generate ideas on 3 X 5 cards. The ideas can then be given an initial ranking by the number of times an idea occurs (although this may not be a measure that an idea is good, but simply that a number of people are aware of it).

- After a series of alternatives has been presented (along with some time for discussion) the participants can rank the alternatives on 3 X 5 cards and a tally developed for the group. This runs the danger of appearing to be a vote which may be misleading unless the audience is very representative; but the same danger is inherent any time a ranking process is used.

Nominal Group Process can be utilized for problem identification, for generating solution elements, and also for identifying impacts of alternatives. It must be understood--and this should be stressed to participants--that all the ideas generated require subsequent detailed staff analysis. It is also important that this analysis be communicated to participants as soon as it is available with opportunities provided for them to respond to the analysis.

One danger of Nominal Group Process--or any complicated small group technique--is that the public may feel "processed" rather than included. If, for example, there was a great deal of animosity toward the study then it might be wise to allow this feeling to be "ventilated" to the total audience so that the break-down into small groups and use of Nominal Group Process is not seen as an effort to control, manipulate, or "divide and conquer."

BRAINSTORMING

While there is research evidence that suggests that group effectiveness may be superior using Nominal Group Process compared to Brainstorming, Brainstorming is such a simple, easy-to-use technique that it is much more frequently used as a participatory technique.

Brainstorming strives to solve three problems:

1. The need for a climate of psychological safety for creativity to be encouraged.

2. The need for people to suspend evaluation in order to be creative.

3. The tendency to approach problems in a fixed, limited way.

The procedures of Brainstorming are quite simple:

1. ALL EVALUATION SUSPENDED

   Participants are encouraged to generate as many ideas as possible in response to a question or problem statement with no evaluation allowed. All ideas, regardless of their apparent validity, are written down on a flip chart (or better yet, pre-hung flip chart paper). A Facilitator will gently, but firmly, remind all participants to stop any evaluation that occurs including hoots of laughter.

2. "WAY-OUT" IDEAS ENCOURAGED

   Since there is a tendency to approach problems in a rigid, fixed manner, only those ideas which fit this limited approach appear "sensible." To break out of a single approach to the problem, participants are encouraged to generate all kinds of ideas including "way-out" ideas. This has caused the technique to be called "Blueskying" based on the notion that "the sky's the limit." While a particular "way-out" idea may not itself be useful, it may contribute to a new way of thinking about a problem and be a path to other ideas which are extremely productive or creative.

3. GROUP SELECTS EVALUATION PROCESS

   Brainstorming by itself does not result in any evaluation but produces an "undigested" list of ideas. As a result, it is necessary for the group to utilize some means of evaluation to narrow down the list unless this narrowing will be done by a subsequent staff evaluation. Some of the methods which can be employed include:

a. *Discuss Each Item*: If there is ample time then it is ideal to be able to discuss each item, as after discussing ideas that initially seemed improbable may seem quite productive. This can, however, be extremely time-consuming.

b. *Brief Discussion - Individual Rating*: An alternative would be to utilize the evaluation system from the Nominal Group Process discussed above. In this approach there is a brief discussion of each idea, usually focused around clarification of the idea more than debate, followed by a ranking of ideas using 3 X 5 cards. This saves time but there is greater risk that some idea, the value of which is not as immediately apparent, will not receive adequate attention since only a limited number of ideas are selected for priority.

c. *Straw Vote*: Another method is the Straw Vote. In the Straw Vote a question is agreed upon such as, "Which ideas do you feel are worth further consideration?" Then each participant is allowed to vote for as many ideas as they wish. Theoretically a participant could vote for all the ideas; but in fact some ideas will receive votes from all participants, some will receive none, and most will receive a few. One important thing about straw votes is that the results are *advisory*. The group may choose to accept the outcome of the Straw Vote or it may choose to alter it or simply use it as the starting point for further evaluation.

d. *Eliminate the Useless Ideas*: Some groups find that they can take the time to discuss every idea once they have weeded out those ideas that are obviously useless. One way this is done is to quickly move through the list and participants can state which ideas they believe are useless. Unless someone else is willing to make a defense of an idea, it is eliminated. If someone does seriously defend the idea, then the idea usually is left in by the group for further evaluation.

VARIATIONS ON BRAINSTORMING

Other Brainstorming skills: Groups that do a lot of Brainstorming usually acquire some "advanced skills" at Brainstorming. Three of the most frequently used techniques are:

Piggy-Backing: This is the skill of taking the idea of someone else in the group and expanding or enlarging it to produce other solutions. To do this, you must be able to fully understand the significance of a concept and extrapolate the concept beyond the implication expressed by the first person.

Combination: This is the skill of taking other ideas which have been proposed and combining them in some way which maximizes their strengths or eliminates their weaknesses.

Fantasy Analogy: One way to break down old ways of thinking about the problem is to project a fantasy of the most desirable of all possible solutions. This form of analogy might begin: "In my wildest fantasies I would like to..." (This technique is taken from William J. J. Gordon's book Synectics which contains a number of techniques for increasing creativity with a variety of analogy techniques.)

USES OF BRAINSTORMING

Brainstorming is equally useful in problem identification, generation of possible solutions, or identification of possible impacts of alternatives. Brainstorming will typically generate an extremely large quantity of ideas which must somehow be evaluated in ways acceptable to the group. Brainstorming is a particularly good beginning activity for a small group as it always produces results and usually generates a high level of energy and enthusiasm. The difficulty is to maintain this same energy and enthusiasm during the evaluation period. Because of its simplicity and the short period of time required for Brainstorming, it can be effectively combined with numerous other workshop activities.

THE SAMOAN CIRCLE

The Samoan Circle is a technique which is useful when you have a relatively large group (20-50) but want to have the kind of interaction of a small group. Supposedly--although this has not been verified--the name "Samoan Circle" comes from a tribal custom of Samoa. According to the story, whenever the Samoans had a big problem they would hold a large council on one of the islands. Everyone would gather in a circle to hear the problem presented and discussed. As the discussion continued, those who were less interested in the problem or the points being discussed would drift out to the periphery, while those who were strongly interested would cluster in the center. People would move in and out as their interest waxed and waned. There were no pre-determined limits on discussion. Discussions simply continued until there was agreement on a course of action.

This basic approach has been adapted into the following procedure:

1. An inner circle of 5-6 chairs is established in the middle of the meeting room.
2. Outer circles of chairs are established so that there is an outer chair for every participant.
3. Only people seated in the inner circle are allowed to speak.

4. Anyone who wishes to speak can move into any open seat in the inner circle.

5. If all seats in the inner circle are filled, then an individual who wishes to speak stands behind one of the chairs. Usually someone will vacate a chair shortly.

Structured or Unstructured Discussion: In the "pure" form of the Samoan Circle people in the inner circle are permitted to speak as long as they want and on any subject. There is no discussion leader, and people in the inner circle "facilitate" their own discussion.

It is also possible to have one seat in the inner circle permanently occupied by a discussion leader. As described in the next chapter, the discussion leader would not get involved in the content but would help keep the meeting on the track, summarize comments, accept feelings, etc. A set agenda can also be discussed if desired. A recorder may also keep a summary of the meeting on the flip chart.

The advantage of the unstructured approach is that the meeting belongs completely to the participants. The agency cannot be viewed as interfering or in any way predetermining the outcome. On the other hand, a skilled discussion leader may be able to help participants feel "listened to," may help the discussion stay focused, etc.

Purpose of the Samoan Circle: The Samoan Circle is an effective technique for forming a consensus or agreement. It allows for complete expression of views, with everyone feeling they have participated, regardless whether they have spoken frequently or not.

Limits on the Use of the Samoan Circle: Like all small group techniques, the Samoan Circle is less likely to work if people are uncomfortable with its use. Also, as audience size gets larger (40-50 people) it may be necessary to have microphones in the inner circle to allow everybody to hear the discussion.

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CHARRETTE

A charrette is a problem-solving process which brings together all the essential publics in a highly intense and prolonged meeting, or a series of meetings, in an attempt to achieve mutual agreement on an overall plan. Various forms that charrettes have taken include:

a. A meeting lasting an entire weekend during which individuals and interest groups participated in the conceptual design of the community medical facility.

b. Week-long meetings conducted approximately 8 hours a day in which parents, teachers and administrators met in open meetings to discuss the future directions of the school district.

c. A series of once a week or weekend meetings to develop agreement on the major outlines of land-use plans for several communities.

The three critical elements in a charrette are:

a. All major publics must be present so that any decisions reached will be accepted on a consensus basis.

b. All participants must commit to stay in a highly intense interaction for a number of hours in an effort to resolve differences and arrive at a plan that is mutually acceptable to all parties. In some cases charrettes are 24-hour-a-day ventures with food and sleeping quarters available to the participants.

c. All participants in the charrette must come with the expectation that the product of a charrette will be a plan that all participants can agree upon.

Charrettes involve considerable advance preparation, usually through a steering committee which includes representatives from the funding sources, relevant agencies, and representatives from the spectrum of citizens groups. The steering committee issues the invitations, handles the publicity, seeks the resource people, and manages the physical arrangements.

A charrette would be a particularly useful technique in a crisis situation in which it was necessary to achieve broader agreement among the various publics and agencies within a short period of time. A charrette might also be useful as a means of resolving an impasse reached between various public groups; or it could be used as the means of shortening the time required to make a decision in a planning study once the basic data collection had been completed.

Two critical elements to the success of a charrette are:

1. The commitment of all participants to participate enthusiastically in an attempt to achieve a mutual agreement, and

2. extensive publicity during all phases of the project so that a larger audience is aware of and supportive of the efforts to reach a mutual agreement.

ADVANTAGES OF A CHARRETTE

- A charrette may be an effective means of achieving a consensus among conflicting groups or interests.

- Since all the critical actors are involved, a successful charrette should result in a commitment by all significant groups to support any plan which was agreed upon.

- The intensive nature of the charrette results in changing prospectives or deeper understanding of the positions held by the various groups.

- By working together in this intensive manner, previously conflicting interests may develop a feeling of teamwork and cooperation which may extend long beyond this particular study.

DISADVANTAGES OF A CHARRETTE

- Charrettes are effective only when all major publics are willing to enthusiastically participate.

- Charrettes are possible only when all major publics are willing to attempt mutual problem solving and the agency is willing to leave the outcome to deliberations that might take place during the charrette.

- Since charrettes are inherently time-consuming, it is difficult for some citizens to participate because of problems of babysitting and taking time off from work. In addition, it is difficult to get the involvement of key decision-makers for the length of time required by the charrette.

DELPHI PROCESS

The Delphi process was designed as a means of obtaining a consensus on forecasts by a group of experts while attempting to minimize any disfunctional effects of group dynamics. To accomplish this, Delphi solicits the advice of a group of experts on questionnaires, provides feedbacks to all participants on the statistical averages of the group, provides a report on the reasoning of those participants whose answers differ substantially from the norm, but preserves the anonymity of the participants. The prime function of Delphi appears to be forecasting. It could be used in a study for such things as forecasting future population, recreation demands, or possibly obtaining consensus on probable environmental impacts. Not only does the technique appear to work effectively with experts in developing a consensus, it also has a high reliability; two groups of experts forecasting the same event will tend to come up with similar predictions. A summary of the Delphi procedure is shown below:

a. An open-ended and unstructured questionnaire is submitted individually to each participant. This questionnaire requests participants to indicate their forecasts concerning the topic; e.g., anticipated growth rate.

b. The "director" of the exercise consolidates the responses and prepares a final list of the forecasts.

c. The "director" distributes the consolidated list to the participants and requests that they make an estimate of the occurrence of each event ("never" is one possible answer).

d. The participants' responses are collected and a statistical summary is prepared. The summary will contain the median and the inner quartile range.

e. The statistical summary is distributed to all participants and the participants are asked to give a new estimate now that they have seen the response. Participants whose answers fall outside the inner quartile range are also asked to state the reasoning behind their answers.

f. These responses are then summarized statistically.

g. The new statistical summary along with the reasoning of those outside the inner quartile range is distributed to each participant and they are requested to prepare a final estimate.

h. A final statistical summary is prepared.

Delphi has been used in public involvement programs and is useful in forming a consensus among those who participate. To the extent, however, that participation is limited to "experts" the consensus may not be shared by a more general public. The problem of credibility can remain whether figures are generated by agency staff or by a Delphi process. One agency has modified Delphi as a means of generating enthusiasm and interest. The Delphi questionnaires and summaries are mailed to a much broader mailing list than are initially anticipated to participate. Even though a limited number of responses may come in as a result of the first questionnaire, the results of those responses are redistributed on the second round to the entire initial mailing list. As each successive round of questionnaires and summaries is distributed it is observable that the number of participants grows. This agency then conducts a large public meeting as the culmination of the process so that final determination of the projection is agreed upon in an open public meeting. It appears that the use of the Delphi serves to generate considerable public interest in this meeting and as a result this meeting is much better attended than it would have been without prior Delphi process.

ADVANTAGES OF A DELPHI PROCESS

- The Delphi process is an effective tool for achieving a consensus on forecasts among groups of experts.
- Delphi minimizes disadvantages of group dynamics such as over-dominance by a single personality or positions taken to obtain status or acceptance from the group.

DISADVANTAGES OF A DELPHI PROCESS

- Delphi may have a tendency to homogenize points of view so that the "conventional wisdom" of the time will tend to dominate.
- The process of mailing questionnaires and redistributing summaries for several iterations can be a time-consuming and cumbersome process.
- The public may prefer to interact person-to-person rather than through the agency which is digesting and summarizing all the comment. This would be particularly true if there is some suspicion of the agency's willingness to consider all alternative points of view.

UTILIZE VARIOUS COMPUTER BASED TECHNIQUES

DESCRIPTION OF THE TECHNIQUE

With the development of the computer and its capacity for storing and organizing large quantities of information there are a number of efforts going on to develop new techniques for participation through the application of computer technology. To date the techniques being explored emphasize one of four major themes: 1. Conferencing, 2. Polling, 3. Gaming or simulation, 4. Interactive computer graphics.

Computer Based Tele-Conferencing: The techniques of computer conferencing have been developed primarily to allow participants who are geographically dispersed to be linked through remote terminal keyboards to "talk" and "listen" to each other by typing out their own messages and reading those of the others. Information including graphics can be made available to all participants in the same form simultaneously and it is also possible to respond to questions asked by the public about that information. Computer conferencing could allow task forces or advisory groups meeting in separate communities to conduct a simultaneous meeting allowing for dialogue, sharing of information, and the reactions of the various publics.

Computer Polling: Equipment has been developed which allows participants in a meeting to indicate their responses to statements, alternatives, or proposals by voting on a hand held computer console. The computer can collect and store the votes and a summary can then be shown on a large electronic display at the front of the room. A series of meeting procedures have been developed by which a skilled moderator can work with the group to identify areas of consensus or disagreement, or areas in which additional information is required. These techniques provide opportunities for every citizen to express him/herself on a number of issues with anonymity.

Computer Based Games: See Section on Simulation Games

Computer Based Interactive Graphics: A number of systems are currently being designed by which the computer can visually display a range of alternatives then redisplay the alternative in response to questions or changing group priorities. These techniques would allow a group to watch a computer display while discussing the issues and, in effect, "ask" the computer to display different alternatives based on different sets of assumptions or priorities. These techniques are still in the developmental stages.

ADVANTAGES OF COMPUTER BASED PARTICIPATION

- Computer based participation could make public participation more convenient by solving the problem of geographically dispersed citizens through the use of local computer consoles.

- Computer based conferencing would allow for much greater access by the public to technical information as well as opportunities to raise questions and request clarifications on the information. The computer polling techniques and interactive graphics could augment natural discussion techniques by permitting all participants to be involved while offering anonymity when desired. These techniques allow the group to graphically see the implications of various priorities and assumptions and encourage the development of a consensus.

DISADVANTAGES OF COMPUTER BASED PARTICIPATION

- Computer based systems can conjure up imagery of machines subjugating man to a programmed set of responses.

- Fascination with technical equipment can sometimes supplant more traditional forms of participation which are more likely to cope with the political realities of achieving a consensus.

- It remains questionable whether the public will be willing to participate "through a machine" rather than by person-to-person contact with other citizens.

- Computer based participation at the present time is extremely expensive and in the developmental stage only.

Section 9:

Evaluation, Response, and Analysis

EVALUATION, RESPONSE, AND ANALYSIS

Evaluation

Staff members should set aside specific times for evaluation of the public participation program. One appropriate time for evaluation is at the end of each planning phase when the staff can review what has taken place and set goals for the next phase. While numbers, such as how many names are on the mailing list and how many people come to meetings, are indicators of public interest and agency effectiveness a better method of evaluation is to pose questions and answer them completely. Each organization will likely have its own questions. Some of them might be similar to those below.

> Were the public participation objectives for the phase just past fully attained? If not, why not? Can they be attained during the next phase? Are the objectives for the next phase demanding but realistic?
>
> Has the agency provided information to the public which is understandable, complete, and accessible? Has the information received from the public been useful? What type of input is needed now? How have citizen comments influenced planning alternatives and tentative decisions?
>
> Which publics have been participating? Are there others which ought to be and are not? Are certain publics assuming a dominant role? Are citizens initiating contact with the agency? Are contacts generally negative?
>
> In public hearings, how many different groups come to testify? Does the testimony generally agree with input from the participating public? Or is new information given there for the first time?

This type of periodic assessment is critical to the successful management of a public participation program which might otherwise slip into inactivity or superficiality. If deficiencies are found, corrective steps should be taken. Only then can the final plan reflect local preferences, be supported by citizens, and meet the standards for public participation facilitating local approval.

The public should also be asked to evaluate the participation program. Participating publics have the most complete knowledge of how they are encouraged to participate, how they feel, and how easy that participation is made to be. Ongoing committees, such as citizens advisory committees, should undertake periodic evaluation similar to that described for the agency. Ad hoc committees or workshops should distribute cards requesting evaluation of pubic involvement to date.

Participants might be asked: Do you have difficulty understanding the information provided? Is it easy to obtain? Are the established ways of participating convenient and effective? Are some publics being left out? How could they be encouraged to participate? Has the agency been responsive to citizen input? Do you feel that citizens can affect the final decisions?

Evaluation of the media coverage given to the issue provides a form of outside evaluation. Editorials, articles, and letters to the editor provide clues as to how the wider public views the participation program. Discontented publics can be identified and brought into the process. Previously unexpressed community values may become media issues and indicate a lack of effort in obtaining or supporting all points of view. Unresponsiveness to citizen input does not go unnoticed by the media. It is helpful to maintain a thorough collection of all relevant topics covered by the media; much can be learned from their analysis.

Response

Several federal agencies have promulgated regulations requiring documented response to public input. Usually in written form, the summaries are a communication tool to inform the public of how their comments are utilized and the current state of a project or issue. Also, they provide decision-makers with an overview of the public's reaction and the changes made to accommodate it. Depending on the program, single responsiveness summaries may be required at major decision points in addition to a final summary.

The report of the public's concerns, prepared by the citizen involvement staff after key meetings and decision points, should be brief and concise summarizing the comments and responses of various groups and individuals. Complex issues and comments should be divided into component elements. An easy-to-understand format should be used. The responsiveness summary should contain an honest assessment of the public's comments, both positive and negative. Equally important is the detailing of the Agency's response to various comments and suggestions, explanation of whether changes or modifications were made, and the reasons for subsequent action.

The summary should be available to the public on request. An announcement in the newsletter, by press release, or in the depository, if one exists, is appropriate. Obviously, all those involved with the decision should receive a complete copy, including advisory group members, those attending the meetings, affected officials, and participating organizations.

Analysis

Analyzing the comments and concerns of the public can be simple or complicated. When a major decision is to be made, a careful analysis of the issue should be attempted. Documentation assures that an objective approach was taken and all factors considered. As a result, the public is assured that all opinions and values have been included in the decision-making.

A USDA Forest Service document, Public Participation Handbook*, provides general procedures and techniques for analyzing public response. Several examples follow.

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*Learning Resource #16: "Chapter VII - Analysis of Public Response," Public Participation Handbook - Parts I and II. United States Department of Agriculture, Forest Service, Public Involvement Group, P.O. Box 2417, Washington, DC 20013.

CHAPTER VII - ANALYSIS OF PUBLIC RESPONSE

INTRODUCTION

Virtually all public responses are opinions for, against, or about the issue in question. These opinions are frequently supported by reasons. These can vary considerably, even those given to support the same opinions. This combination of opinions and supporting reasons defines the values the public holds with regard to the issue in question.

The purpose of analysis is to summarize and display the number, content and nature of public responses so they can be considered when making recommendations and decisions. Public response analysis seeks to identify public opinions and values, their underlying reasons, and new ideas and information about issues, geographic areas, and resource management alternatives.

A. - PRINCIPLES THAT MAKE PUBLIC INPUT ANALYSIS EFFECTIVE

1. Analysis is different from evaluation. Analysis seeks to describe what the public has said as completely and directly as possible; it does not assign any weights or policy recommendations. Evaluation is subjective. It interprets the importance of various kinds of public input and integrates it with other factors in order to reach a decision. The importance of various kinds of input is decided in the evaluation stage, not during analysis.

2. Decision-making questions guide analysis. Before analysis can be meaningful, the decisionmaker must spell out questions s/he wants answered from the public. Often, full-scale public involvement efforts are undertaken without any formal consideration of how public input will be analyzed or focused on the issue in question. Analysis attempts to answer such questions as:

- What opinions were expressed concerning management alternatives,
- Why do people feel as they do, or what reasons were given to support the opinions they expressed?
- How did opinions vary according to form of input (statements at meetings, personal letters, formal reports, petitions, form letters, etc.)?
- Who responded (individuals or organizations)?
- Where did the input originate (locally, regionally, or nationally)?
- What additional information, ideas and issues were presented?

If the decisionmaker can spell out those questions he needs answered early in the public involvement process, a more effective job can be done in obtaining and analyzing input.

3. All input is relevant and must be processed. Because input expresses opinions and values, it has implications important to the decisionmaker. Analysis must include all input, regardless of its

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form. Both general opinions and well-reasoned arguments, including highly complex proposals are expressions of values. Analysis must record and summarize all public input--including emotional statements, general opinions, and other expressions of values--as well as the more specific comments and detailed management proposals.

4. Analysis must be systematic, objective, visible, and traceable. Effective analysis calls for these characteristics:

- It must be systematic. Analysis should follow a structured procedure which checks and balances the way input is handled and processed.
- It must be objective. Personal prejudices and subjectivity must not affect the way input is summarized. Analysis must assure that an independent review would generate the same information.
- It must be visible. Administrators and public alike must recognize input analysis as a distinct and necessary phase in the public involvement process. The product must be available for review by concerned parties.
- It must be traceable. An independent party should be able to follow the manner in which input was handled. The system must leave "tracks" so analysis can be replicated.

5. Identity of the input must be maintained. It is important that no combining, weighing, or evaluating of input be done during the analysis. Results from different public involvement activities must be summarized separately so the decisionmaker can distinguish between different kinds of input when deciding what importance to attach to them. Each must be studied for its unique implications.

6. Analysis must be a continuing process. Public input which affects a given decision might be solicited during a critical period prior to the decision. However, for long-term projects, many comments precede or follow the formal collection stage, in some cases by several years. The balance of opinion can change as more people become involved, more and better information is obtained, and public attitudes shift in response to changing situations. For instance, the "energy crisis" has probably caused some people to change their attitudes about coal mining. Therefore, it is essential that the analysis of public input reflect comments made before any special appeal for response has been made. Subsequent input must be recorded for subsequent retrieval when needed, or when significant shifts in opinion and values are suspected. Interested persons should not be required to resubmit their views repeatedly for administrative convenience. It should be possible for managers to consider all input, even that which does not fall within a public comment period.

B. CRITERIA FOR EFFECTIVE ANALYSIS

From these principles, we can derive specific criteria for analyzing public input:

1. The method should summarize the extent, content, and nature of public input in relation to the decisionmakers' questions.
2. It must be objective.

3. It should be visible and traceable.
4. It must be reliable. Opinions expressed must be recorded the same way by different analysts.
5. It should provide for uniform application between different administrative units.
6. It should be flexible to accommodate different conditions.
7. It should summarize the balance of opinions expressed and describe variations in each opinion.
8. It should provide other descriptive and qualitative information about the content and nature of the input.
9. It should facilitate environmental analysis leading to the preparation of final environment impact statements by identifying significant new information and arguments for and against the proposed actions.

Although there is no single ideal method for analyzing public input, the system chosen should be examined with these principles in mind.

C. GENERAL PROCEDURES FOR CODING AND ANALYZING RESPONSE

Analysis should provide for the orderly and systematic transfer of information contained in any type of response to a form that can be summarized easily. Briefly, the steps in doing this are:

1. Identifying questions for which decisionmakers need answers. It is essential that the analyst know what information the decisionmaker wants from the public. This is the key to a useful analysis. The analyst must consult decisionmakers to insure that nothing important is overlooked. These questions, not only guide analysis, but also the collection and evaluation phases of the public involvement process as well.

2. Surveying input to determine breadth of issues it discusses. This step provides an overview of issues discussed and information provided in the input. Although it is important to specify decision-making questions, it is just as important that the structure of the analysis system not filter out new or unanticipated information. To be responsive to the varying nature of input, the analysis system must be able to capture the full breadth of public input so it can be summarized for review.

In order to determine the breadth of issues which input discusses, a content summary is done on a random selection of comments. This defines the range and diversity of opinions, supporting reasons, and factual material contained in the input. Content Summary Analysis is discussed later in this section.

3. Developing coding rules and analysis procedures. Coding is the process of transferring content to a form that facilitates summary. Coding rules are a central part of the analysis system's design and in preparing them, a number of decisions must be made:

   a. How are the decisionmaker's questions defined in terms of "categories?"

Category construction is widely regarded as the most crucial aspect of content analysis. Categories are the 'pigeon-holes' into which

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information is classified. In general, categories should be responsive to the questions for which decisionmakers need answers. This means that the analyst must clearly define the variables s/he is dealing with. S/he must also specify the indicators which determine whether a given comment falls within the category. Good definitions guide coders to produce reliable judgments.

The analyst must also determine how general or specific the categories should be. Subdivision within categories permits the analyst to make more comparisons, but coders will have to make more and finer judgments. Costs will increase and reliability may suffer as the number of categories increases.

Categories must be exhaustive; all relevant content must fit into a category. Finally, categories need to be mutually exclusive; no piece of information can be placed in more than a single category.

Categories must be defined rigidly and exhaustively, to reduce coding from a judgmental task to a clerical one.

b. What "unit" of content is to be classified?

In addition to defining the categories, the analyst must also designate the "unit" to be coded. A unit is the specific segment of information to be placed in a category.

A single word is generally the smallest unit that is used in content analysis. For many purposes, the reason, a single assertion about some subject, is the most useful. A major drawback is that coding reasons is usually time consuming, and the boundaries are not as easily identified. However, reasons are almost indispensible in capturing values, attitudes, beliefs, and the like.

It may not be possible to classify a unit without some further reference to the context in which it appears. Attitudes toward wilderness, for example, cannot be inferred solely on the basis of how frequently that word and others defining the category "wilderness" appear in the response. The context unit is the largest body of content that may be searched to characterize a unit. Using the above example, once the coder identifies the symbol "wilderness" in a response s/he may be instructed to search through the sentence, paragraph, or even the entire response (a report, resolution, etc.) for evidence of the author's attitude toward wilderness.

c. What system of "enumeration" will be used?

All content variables are countable, but there are different ways to measure quantified results. In deciding how to analyze data and present findings, the analyst chooses both the unit and the "system of enumeration".

In the following example, an analyst is interested in determining public preference for a particular resource management alternative. As the recording unit, s/he has elected to use "reasons." They were scored favorable, neutral, or unfavorable. S/he might also have chosen the entire document as the unit of enumeration to determine public preference. Figure 7-1 shows how different units may produce strikingly different results.

FIGURE 7-1 - Comparison of Results Using Different Units of Enumeration

		Unit of Enumeration	
Document	Recording Unit	A. Reasons	B. Documents
1	4 favorable	4 favorable	1 favorable
	2 unfavorable	2 unfavorable	
2	2 favorable	2 favorable	1 favorable
	1 neutral	1 neutral	
3	3 favorable	3 favorable	1 favorable
	2 neutral	2 neutral	
	2 unfavorable	2 unfavorable	
4	0 favorable	0 favorable	
	1 neutral	1 neutral	1 unfavorable
	7 unfavorable	7 unfavorable	
Summary	9 favorable	9 favorable (37%)	3 favorable (75%)
	4 neutral	4 neutral (17%)	1 unfavorable (25%)
	11 unfavorable	11 unfavorable (46%)	

Using "reasons" as units of enumeration, public preference appears to be slanted against the resource management alternative. Using "documents" however, public preference appears clearly in favor of the alternative.

Each system of enumeration carries with it certain assumptions regarding the nature of the response and things that can be drawn from it. The first method, (A), assumes that what is important for assessing public preference is the number of favorable and unfavorable responses about the resource management alternative (the whole is equal to the sum of its parts). The second, (B), assumes that the respondent's preference lies in the overall impression created (the whole is different from the sum of its parts).

4. Pretesting. No one is completely assured against being "locked in" by their categories once coding has started. Before the coding actually begins, the analyst may want to pretest a portion of the response to test the adequacy and usefulness of the categories. Some modification may be required.

Pretesting allows the analyst to determine the "reliability" of his categories, as well as the reliability of the coders. Category reliability depends on the analyst's ability to define categories clearly enough so that competent judges/ coders will agree to a high degree on which units belong in the category and which do not. When pretesting reveals poor agreement among coders, the disagreement may lie in the category rather than the coder.

If coder training fails to resolve the problem, there is reason to suspect that the categories are either ambiguously defined, inappropriate to the data, or in some other way deficient. If this is the case, the category should then be clarified or redefined and retested.

Ideally, pretesting should be conducted at the close of the public comment period when all response has been received. Studies show that the nature of response can change significantly as the deadline for public comment approaches. By waiting and conducting pretests after the close of the comment period, the analyst is afforded a more thorough and valid test of the adequacy of coding rules and procedures.

5. Coding input. The major objective in coding is to capture accurately and objectively the complete scope of information gathered. The principal obligation of the coder is to record only what the respondent said, not what the coder thinks is meant. This is possible with careful attention to coding procedure and training of coders.

To ensure coder accuracy, reliability must be checked at regular intervals throughout the entire analysis process. This is accomplished by recoding a sample of response already coded using the same set of coding rules and procedures. If coding is reliable there should be similar results.

The importance of adequate time for completing coding operations cannot be stressed enough. Studies have shown that analyses performed within tight time frames will suffer qualitatively. Analysts should remember that the principal concern is accuracy, not speed.

Time required will vary depending on the type of analysis technique, the complexity of the issues, the number of coding personnel and the number of responses. The bulk of response (sometimes as much as fifty percent) will be received shortly after the close of the public comment period. Sufficient lag time should be allowed to handle overflow.

6. Summarizing the content and nature of response. Upon completion of coding, the analyst is ready to summarize the information into the form for decisionmakers to use. Sorting is usually done by hand, by computer, or both.

End products vary with technique. Summaries may consist of a series of tables showing how opinion varied according to form of input, residence, who responded, and so forth. Other summaries, as in the case of Content Summary Analysis, may consist of sentences or sets of sentences (opinions and reasons) as the public expressed them in the public's own language. In either case, it is particularly important that the analyst provide information about all issues discussed in the input, not just those related to the specific, decision-making questions. This will ensure that new or unanticipated information is not overlooked.

Decisionmakers may request that the analyst provide more than a collection of tables. They may be interested in what interpretations the analyst makes of these tables and what the limitations are. Writing such reports requires that the analyst interpret the tables with great care to ensure the narrative accurately describes the data. To guard against subjective or erroneous interpretations, draft copies of the reports can be circulated to others for technical review. These reviews are invaluable in keeping interpretation accurate and incorporating points the first writer may have missed.

D. TECHNIQUES FOR ANALYZING PUBLIC RESPONSE

Various techniques are available for analyzing public response. Among those currently in use are Content Summary Analysis and Codinvolve Analysis.

1. Content Summary Analysis - Content Summary Analysis is one of the simplest methods of analysis. It is a traceable, visible system which provides for the summarization, organization, and documentation of public response in an objective and systematic manner.

In Content Summary Analysis, opinions and supportive reasons are captured together. The primary intent is to capture the sentence or sets of sentences (opinion and reasons) in the public's own language. This will reveal why something is supported in the words of the respondent. It provides an organized summary of public responses for evaluation, and allows the agency to be responsive to the public.

Analysis Steps:

The following example outlines the steps involved in carrying out a Content Summary Analysis on the Resource Planning Act (RPA). Public response is largely catagorized by chapters of the agency's documents, the assessment and the program.

a. Documenting original response. Traceability is a key factor in the analysis process. To ensure that responses collected and processed are traceable through all phases of the decision-making process, the following system of identification is used.

- Date-stamp the document in the upper left-hand corner as it is received.
- Stamp the upper right-hand corner with a "respondent identification number." This number includes: (1) regional identifier, (2) assigned sequential number according to respondent category, and (3) respondent category code, i.e. "E" for response from an environmental/conservation group. A complete response identification number for the third response from Region 1 would read: R1-3E.
- Every page of the response will be stamped and identified exactly the same as the first page, and each page must be numbered, i.e., 1 of 3, 2 of 3, 3 of 3.

b. Determining respondent categories. The following list can be used to develop respondent categories. If problems arise in determining the appropriate category for a response, the analyst supervising the operation should determine how to handle the response so that similar responses are categorized the same way. Categories can be added, expanded, or combined as necessary as long as it is consistent throughout the entire analysis process. Some respondent categories are:

- "Academic" - Official of an educational institution or faculty member.
- "Business/Industry" - Organizations or groups operating for profit.
- "Citizen" - Individuals not representing a particular group, association, or organization.
- "Other" - Unidentified, etc.
- "Environmental/Conservation/Civic" - Nonprofit organizations or groups; i.e., Sierra Club, Audubon Society, League of Women Voters, etc.
- "Agency Personnel" - Employees of the agency.
- "Government" - Officials or units of government. Subcategories might include distinctions in local, State and/or Federal levels of government.

c. Original, master, and copies of response. Make two copies of each response. If all responses are analyzed at one location, only one copy is needed because the original can serve as the master mark-up copy.

- File original
- Use two copies for analysis. One will be the master mark-up copy for eventual filing, the second will be cut and pasted for typing.

d. Mark-up of response. Materials needed for the mark-up include: pencils, legal size folders, legal size papers, scissors, transparent tape, and the two copies of each response.

- The persons analyzing responses should place their initials at the bottom left-hand corner of the first page.
- Read the entire response before proceeding with the analysis.
- Capture opinions and supportive reasons by underlining them with a pencil. Two important things to remember are: (a) DO NOT SEPARATE REASONS AND OPINIONS, and, (b) WHEN IN DOUBT, CAPTURE MORE INFORMATION THAN NEEDED. There will be another review where irrelevant and duplicated material will be eliminated.
- The substance of public response content (opinions and reasons) is captured and placed in various categories. The intent is to capture the sentences (opinions and reasons) as the public expressed them.

e. Coding response. All of the information on the two copies has to be coded. The following coding methods should be used.

- At the left margin nearest the information underlined, repeat the response identification number that is in the top right-hand corner of the page, e.g., R1-3E.

- Add to this number the first letter of the document which the response refers to. Using the RPA Program and Assessment documents as examples, this letter will be "P" if the response refers to the Program document and "A" if it refers to the Assessment document.
- Follow the code letter "P" or "A" by the appropriate chapter number. The code identification number R1-3E-P-5 indicates the program document, chapter 5. The analyst must be familiar with both the Program and Assessment documents so that if a response does not cite a specific chapter, the analyst will know whether the response refers to a specific chapter or whether it is general information.
- If the information refers to both documents, use both document code letters and appropriate chapter numbers. example: R1-3E-P-5/A-1

There are three instances where the code letter "G", for general information, should be used:

- If the information does not specifically refer to the Program or Assessment document, the code letter "G" will be used. Example: R1-3E-G
- If the information refers to the Program document, but not to a specific chapter, the code letter "G" for general would follow the document code "P". Example: R1-3E-P-G
- If the information refers to the Assessment document, but not to a specific chapter, the code letter "G" for general would be used following the document code letter "A". Example: R1-3E-A-G

f. Sorting responses. There should be an appropriately labeled folder for each chapter of each document. The underlined response should be cut out and filed in the correct folder. It is important that the code number at the left margin be included when cutting out information. It will indicate how information should be filed, and allows the response to be traced back to the original response.

g. Organizing responses. The responses collected in each chapter folder are given a final review by one person (or small team) to eliminate duplications or irrelevant material and to make sure they are filed in the right folder. Responses are thus organized in as logical a sequence as possible: document, chapter, page, paragraph, and taped to a legal size sheet of paper in preparation for final typing.

h. Master mark-up copy. The master mark-up copy is marked and coded exactly the same as the xerox copy that was cut and pasted. The master mark-up copy shows that the information was analyzed and can be pulled if needed later. From the coding, the analyst can locate in the final analysis summary, the exact wording of a response or its exact equivalent.

2. Codinvolve Analysis

Codinvolve Analysis is a flexible, content analysis method specifically designed for coding, storing, retrieving, summarizing, and displaying responses. Codinvolve is based on a coding process which provides quantitative summaries of all opinions and supporting reasons. Public expressions are taken at face value since Codinvolve Analysis won't make corrections for any shortcomings in citizens' input.

The Codinvolve method assembles public information and values, underlying rationale, and new ideas and information about issues, geographic areas, and alternatives.

Codinvolve is not cheap in cost or time. As with most inventory systems, learning and using it requires intensive effort on the part of managers, technicians, and coders. Past studies indicate that Codinvolve analysis usually runs between $3 and $4 per comment.

Analysis Steps:

Following are the basic steps in completing a Codinvolve Analysis. As in Content Summary Analysis, documenting the response is a prerequisite. In the Codinvolve Analysis, however, coding is done on a coding form, so duplicate copies are not necessary. The original response serves as the file copy. For traceability, the response must be assigned a respondent identification code and it is used on the coding form.

a. Determining agency questions. As with any analysis method it is essential to know what information the agency wants from the public response. If, for example, decisionmakers are interested in soliciting public comment on a number of resource management alternatives, the analyst may use "Alternatives" as a primary coding category. A respondent's preference and supporting reason would be captured in the primary category's subcategories, "Preference/Opinion" and "Reasons." The alternative, preference and reasons would be the recording units.

Since many respondents may address all alternatives collectively, ("I oppose all the alternatives"), the analyst may want to distinguish between specific and collective/general comments.

Some respondents may propose new alternatives. New codes can be assigned as conditions warrant. This is determined after surveying the breadth of response.

If decisionmakers are interested in guaging preference by those who responded, conservation groups as opposed to resources production groups, individuals or government officials, etc., a primary category of "who responded" is required. If information on the form of response is requested, (petitions, personal letters, etc.), then a primary category for this is needed.

b. Surveying the response. This step provides an overview of information provided in the response. Although it is important to specify agency questions, it is also important that the analysis system not filter out new information. In order to determine the breadth of issues, a sample of response is captured by means of a content summary reflecting the substance of comments. The content summary defines the range and diversity of opinions, supporting reasons, and factual material contained in the response.

c. Designing the codebook and coding/summary form. The two basic documents for a Codinvolve Analysis, the codebook and summary form, are built around the results of the previous step.

The codebook contains instructions, definitions, and examples that show how information should be coded. It is a basic reference, and any changes in coding procedures must be noted in it. In order to ensure reliability among coders, the set of instructions must be clearly understandable and uniform. The clarity of coding categories and the rules and procedures guiding their use should be tested prior to the outset of the actual coding.

The codebook tells the coder how to use the coding/summary form on information that will be recorded. Depending on time available, amount of input, etc., the coding/summary form might be an edge-punch card, computer card, or an Optical Mark Reader (OMR) form. These forms resemble those currently used in national aptitude testing exercises. Each is effective, but experience has shown that the edge-punch cards may be more practical since they can be used by untrained personnel in remote field locations.

d. Coding input. Coding is a process that must be entirely objective and replicable. This is possible with careful attention to coding procedure and training.

Using the codebook and coding/summary forms developed in the preceeding steps, the coder records what the respondent said. Relevant information is usually underlined and codes for these items are entered in the left-hand margin of the response. Coded input is then entered on the coding/summary form. As new information is received in a particular category, new codes are assigned. If a numeric code has been used to record different reasons for preferring different resource management alternatives, and a new reason surfaces, a sequential number is assigned that reason and entered in the codebook. The coding/summary form should be designed to accommodate these additions and any changes.

To ensure coder accuracy, reliability must be checked at regular intervals. These checks show how carefully the coder is following directions and objectively recording the content of input. At the outset a discussion should be held with all coding personnel to resolve any questions pertaining to the application of the coding rules and procedures.

It takes at least three or four days to train a group of coders. Reliability during this period usually starts at 50 to 65 percent and rises to 90 percent or higher. Statistically, 95 to 97 percent is acceptable. Coder reliability tests are performed by recording coded response, using the same coding rules and procedures, and measuring the number of correct coding operations against the number of potentially correct coding operations. If a response contains 20 coding operations and the coder has correctly coded 18 of these operations, reliability is measured at 90 percent (18/20 = .90).

The amount of input a coder can handle without losing a significant degree of reliability varies with individuals and with differing types of input. For complex letters, average output is nearly 50 a day, but beyond that number, reliability begins to decline sharply. Structured types of input are easier to code, so form letters and coupons may be processed at a rate of nearly 150 or 200 a day. Analysts should remember that the principal concern is accuracy, not speed.

e. Summarizing input. Upon completion of coding, the analyst is ready to summarize the information for decisionmakers to use. Sorting is usually done either by hand using edge-punch cards, by computer or both.

The end product of Codinvolve is a set of tables which summarize all public input (Figure 7-2). To answer the questions spelled out earlier, and to display the sentiment expressed by the public, analysts must organize tables which portray the data. For instance, if decisionmakers are interested in how the public responded to three alternatives, they might want tables that show how opinion varied according to form of input, residence, and who responded.

FIGURE 7-2 - Balance of opinion by Form of Input with Supporting Reasons

Alternative 1	Form of Input				
	Letters	Petitions	Reports	Form Letters	Total
For	82(1) 90(S)	2(1) 83(S)	3(1) 3(S)	82(1) 86(S)	169(1) 262(S)
Against	31(1) 35(S)	18(1) 645(S)	4(1) 5(S)	21(1) 21(S)	74(1) 706(S)

(1) = Input
(S) = Signature

Reasons given in support of opinions expressed

Reasons For

Best for economy (151)
Provide jobs (111)
Provide mass recreation (61)
Other alternatives too restrictive (43)
Restricts intensive recreation (26)
Restricts roads (19)
Impact on local economy (9)
Restricts timber harvest (4)
Enough already (1)

Reason Against

Already too many roads (72)
Need more wilderness (65)
Preserve for posterity (47)
Protect areas from development (31)
Protect areas from timber harvest (22)
Protect areas from general misuse (12)
Last chance (8)
Wildlife values (3)

3. Comparative Input Analysis System

a. General Guidelines. The Comparative Input Analysis System places emphasis on the qualitative content of responses with provision for quantitative analysis as well. It blends essential features of Content Summary Analysis and Codinvolve. It is a traceable and visible system which summarizes, organizes, and documents public response in an objective and systematic manner.

The system examines the arguments and evidence given by the public and identifies where the focus of agreement and disagreement lies among the various categories of public respondents, and how regional areas may concur or differ.

Following is a step-by-step description of the analysis system. Although RPA program elements are referenced throughout, the system can be modified to handle other needs. Region 2, for example has successfully used the system to analyze public comments received during the issue identification phase of the Regional land management planning process.

The first block in the lower portion of the grid was used to designate the Forest Service Region receiving the response. In regional application of this process, these "unit identifiers" might indicate which National Forest received the response.

The rest of the blocks in the grid were used to identify specific types of data mentioned. If a respondent indicated a preference for 1 of the 5 alternative program directions (APD) in the 1980 RPA, the third block was used to capture the respondent's preferred alternative. The preference was denoted by using a single-digit numeric code (1 through 5). If no APD was preferred, a "0" was entered in the third block.

The fourth block was used if the respondent addressed some modification of any of the proposed RPA alternatives.

b. Receipt and initial coding of response. As soon as a response is received, it is date-stamped and a respondent identification code is assigned and written on the response. This will consist of 1) a respondent identifier designating "who" responded; 2) a sequence number (by respondent group); 3) an identifier designating the form of response; 4) the zip code number showing where the response originated; and, 5) the Regional and/or Forest identifier.

- Respondent identification code - The respondent identifier designates who the response was from. Alpha and/or numeric codes can be used for this purpose. In the 1980 RPA public input analysis, this code was a single-digit alpha character (A-K) assigned to eleven different categories. They included:

    - Individuals
    - Commodity interest groups
    - Motorized recreation user groups
    - Nonmotorized recreation user groups
    - Civic groups
    - Elected officials (local, State and Federal)
    - Public agencies (local, State and Federal)

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- Sequence numbers - These numbers are assigned as each response is received. Both the number and name and address of the respondent are placed on a separately kept respondent file. A four-digit sequence number will handle 9,999 respondents, a five-digit sequence number, 99,999 responses and so on.

- Form of response - Here again, alpha or numeric codes may be used. In the 1980 RPA public input analysis, alpha characters were used to denote (i) letters, reports, response forms, or notes; (ii) petitions; and (iii) form letters.

- Geographic identifier - This identifier designates where the letter is from and is used to distinguish "local" from "non-local" response. The standard U.S. Postal Service five-digit zip code is used for this purpose.

- Regional and/or Forest Identifier -

During the 1980 RPA public input analysis, a grid-stamp was used to record each respondent identification code.

The respondent identification code served to organize public response for the purpose of analysis. Steps 1 through 5 below provide a step-by-step description of this task. The remaining steps outline the rest of the Comparative Input Analysis process.

- Step 1 - Staff member codes respondent category identifier, sequence number, form of response, geographic identifier, and Regional and/or Forest identifier.

  Question Answered - Who and where was the response from; what was the form of the response; how many responses were there?

- Step 2 - Develop a list of respondents and their addresses.

- Step 3 - Make two copies of each response and file one in the Regional Office and send the other to the Washington Office.

- Step 4 - Sort into respondent categories as coded.

- Step 5 - Each response is read by staff. Where clearly discernible, respondent's ADP preference (APD 1-5) is entered on coding grid. If respondent offers modified APD, enter in coding grid using 'modification' definition. Coding of Issues, Supply and Demand, etc. is done after Step 17.

  Question Answered - What responses indicate a preference for which APD? Which responses offer modifications?

- Step 6 - Read all responses by each respondent category and list each distinct reason for preferring an APD. Reasons will be concisely written, but clearly understandable.

  Question Answered - What reason did each respondent category give for preferring an APD?

- Step 7 - Tabulate the number of responses (documents) in each respondent category. Tabulate reasons that the review shows to have at least ___% support by that respondent category. Write actual count and percentage beside each reason having ___% or more only.

  Question Answered - What reasons received ___% support by respondent category for each APD?

- Step 8 - Examine relationship of reasons, look at nature of the argumentation (evidence), determine essential features or orientation, classify reasons.

  Question Answered - What observations can be made of the reasons given by respondent category for each APD?

- Step 9 - Narrow reasons to primary argumentation by means of team discussion and agreement. Reasons having ___% support should usually be shown in the primary argumentation. The identifying and ranking should be done with information developed from Step 6 and 8.

  Question Answered - What is the primary argumentation of each respondent category for each APD?

- Step 10 - Using information developed in Steps 8 and 9, identify major agreement in primary argumentation of respondent categories for each APD.

  Grouping respondents into categories of Interest Groups, Government, Elected Officials, and Individuals can be helpful.

  State major agreement in narrative form. This may require several concise statements about major agreement of respondent category. Analysis team discussion and agreement is essential.

  Question Answered - What major agreement exists in primary argumentation between respondent categories for each APD?

- Step 11 - Using Step 10, develop a thrust statement from each respondent category (A-K) for each APD. Requires compressing all primary argumentation of each respondent category into a thrust statement for each APD.

  Question Answered - What is the overall thrust of argumentation of all respondents for each APD?

- Step 12 - Read all responses in each respondent category. Determine reasons by RPA component. List distinct reasons concisely.

  Question Answered - What reasons did each respondent category give by RPA components?

- Step 13 - Tabulate the reasons used most often by each respondent category for the same RPA component.

  Question Answered - What reasons were used most often with the same RPA component by respondent category?

- Step 14 - Narrow the reasons for primary argumentation by means of team discussion and agreement. Two to three statements of primary argumentation per respondent category is sufficient.

  Question Answered - What is the primary argumentation for RPA components by respondent category?

- Step 15 - Determine thrust statement by using output from Step 14. This requires team discussion and agreement.

  Question Answered - What is the overall thrust of each respondent category with respect to a modified ADP?

- Step 16 - Read all responses in each respondent category. List each distinct reason for disliking an APD. Reasons must be concisely written.

  Question Answered - What reasons were given by each respondent category for not preferring an APD.

- Step 17 - Develop overall thrust statement from reasons listed for each APD.

  Question Answered - What is the overall thrust by respondents not preferring ADP(s)?

- Step 18 - Classify comment by policy issues listed in RPA Report. Capture comment and reason as concisely as possible and follow with sequence number (in parenthesis). Tabulate option(s) favored by respondent category on each issue.

  Question Answered - What did respondent categories say about the RPA policy issues?

- Step 19 - Determine narrative statement(s) for each policy issue by using output from Step 18.

  Question Answered - What did each respondent category generally say about each policy issue?

- Step 20 - Read responses in each respondent category. Capture comment and reason as concisely as possible and follow with sequence number (in parenthesis).

  Question Answered - What did respondent categories say about supply/demand situation?

- Step 21 - Review content summary and develop narrative statement(s) that summarizes comment on the supply/demand situation by respondent category.

  Question Answered - What did each respondent category generally say about the supply/situation?

- Step 22 - Read response on decision criteria in each respondent category. Capture comment as concisely as possible and follow with sequence number (in parenthesis).

  Question Answered - What did each respondent category say about the decision criteria?

- Step 23 - Review content summary and develop narrative statement(s) that summarizes comment on criteria by respondent category.

  Question Answered - What did each respondent category generally say about the decision criteria?

- Step 24 - Read responses in each respondent category concerning other parts of the RPA documents. Capture comment as concisely as possible and follow with sequence number (in parenthesis).

  Question Answered - What did respondents say about other parts of the RPA documents?

Section 10:

Case Studies of Public Participation

CASE STUDIES OF PUBLIC PARTICIPATION

It is one thing to theorize on the effectiveness of public participation. It is not without risk that the uninvolved prescribe this or that technique as the sure-fire key to a successful public participation program. When it comes time to assemble the public participation program, however, the public participation coordinator will find the design of the program depends to the greatest extent on the context of the decision in which he or she hopes to involve the public.

If the practitioner is adept, he or she can use the unique explicits of the individual project to enhance the effectiveness of the public participation effort. The first four of the case studies presented in this section show how careful planning, which considered the uniqueness of the situation, led to successful public participation efforts. The last of the five case studies shows how failure to plan the public involvement within the social and environmental context of the decision can lead to the derailment of a plan.

Those responsible for public involvement functions should review these case studies. Some of the procedures and techniques offered in this document are used in these cases. Others would have enhanced the amount and quality of the input had they been properly used.

CITIZEN INVOLVEMENT IN OLD COLONY PLANNING COUNCIL WATER QUALITY PLANNING UNDER SECTION 208, CLEAN WATER ACT *

This case study provides an analysis of the public participation program integrated into the 208 planning process of the Old Colony Planning Council (OCPC) of Brockton, Massachusetts. It is particularly useful in examining the roles and integration of multiple techniques of public participation. Reflected are the first six to twelve months of a two-year public participation effort.

Section 208 water quality planning offers several unique opportunities. Among these opportunities in the Old Colony Planning Council (OCPC) 208 area are the following: the analysis of water quality problems on an area-wide basis, the investigation of non-point as well as point sources of pollution, the examination of groundwater problems as well as surface water quality problems, the investigation of non-structural as well as structural solutions, and the implementation ability of 208 planning. Related to the last and perhaps the most challenging opportunity of 208 planning is public participation.

Water pollution control planning activities that come under the umbrella of the 1972 Amendments to the Federal Water Pollution Control Act all have public participation requirements. What makes the public participation mandate in Section 208 planning unique? Probably the most significant reason is that under EPA Regional guidelines, 208 agencies have been required to allocate a minimum of 10 percent of the total 208 budget to public participation activities. This requirement has enabled 208 agencies to commit adequate staffing and time to a public involvement program.

Given this mandate, OCPC in the first six months of its 208 program embarked upon an extensive public participation effort. As indicated in the OCPC 208 Project Control Plan, the 208 public participation program in the Old Colony area has four primary goals:

1. Develop on-going public participation mechanisms to involve the public in 208 planning.

2. Develop public awareness of water quality issues and problems.

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*Citizen Involvement in OCPC 208 Planning: A Progress Report. U.S. EPA, 1976.

3. Involve the public in the technical and policy aspects of planning including goal definition and plan selection.

4. Develop public support for the implementation of the 208 plan.

The purpose of this account is to review the OCPC 208 public participation activities aimed at achieving these goals. The Staff Involvement Section briefly indicates the OCPC staff structure that has been used to implement the public participation program. The major portion of this report in the Citizen Involvement Mechanisms Section details the mechanisms and techniques developed by the staff to engage the public in OCPC 208 program.

The final section on this report, Citizen Involvement Issue, reviews some of the public participation issues that emerged in the first six months of the OCPC 208 program.

STAFF INVOLVEMENT

During the first six months of the OCPC 208 program, the public participation effort evolved from a "one-person public participation coordinator" concept to a concept whereby the entire OCPC 208 staff has been involved in public involvement activities. This change in direction is necessitated not only by the amount of public participation activities undertaken and the resulting demand on staff time, but is also required to achieve the goal of intergrating the technical aspects of the planning process with the public involvement activities. Consequently, a minimum of fifteen percent of each staff person's time has been devoted to public participation activities. Overall coordination and responsibility for execution of public participation activities is retained by one person on the staff -- the public participation coordinator. The entire staff is involved, however, in the actual completion of activities. This involvement by other staff members may range from the review of a workshop questionnaire to a presentation at a workshop, a staff meeting concerning public participation strategy, attendance at a local ad hoc group meeting, or a field inspection of a problem area mentioned by a local resident. Through this multi-staff involvement in public participation activities, the artificial distinction between public participation activities and the technical planning is broken down. Of major importance, OCPC 208 public participation is perceived not in terms of a public relations effort but as a genuine public involvement effort. It is not a side-show activity but an integral portion of the planning process.

In order to ensure that each staff member is apprised of another staff member's activities at a local meeting or to ensure that there is a comprehensive understanding of a local workshop, staff meetings, staff memorandums, and staff briefings and the resulting written workshop summaries ensure that public comments and ideas are not forgotten but discussed and, where appropriate, dealt with. Similarly, a comprehensive newspaper clipping file is maintained for each of the local newspapers. Each staff member reviews the clippings to help keep abreast of local water-quality-related issues and the activities of local groups.

As indicated in the section on Citizen Involvement Mechanisms, OCPC uses a variety of mechanisms to reach the public and to be reached by the public. The experiences thus far have helped the staff to make refinements in particular public participation strategies. An attempt has been made to not only learn from our own 208 experiences, but to also review public participation activities and materials in other 208 agencies. In addition, EPA public participation workshops have been attended, EPA materials reviewed, and published public participation concepts have been consulted.

CITIZEN INVOLVEMENT MECHANISMS

The OCPC 208 staff pursues many different mechanisms and techniques in order to achieve its public participation objectives. This diversity of mechanisms is directed to serving the broadest possible public in each community. In addition, a special effort is made to involve local public officials, town/city boards, and other local groups in the public participation program. In this way, citizens are given a choice regarding the kind of task to be performed, their level of personal time commitment to the 208 planning process, the degree to which their input is technical or nontechnical, whether they deal with local or both local and area-wide issues.

The OCPC 208 public participation program is an integral component of the entire 208 planning process. Documenting this process serves several important functions. First, it provides the OCPC 208 staff with another opportunity to inform the public of the area-wide water quality study. Second, it gives the public a chance to review and evaluate the public participation effort to date, and to suggest ways in which it might be made more effective. Finally, it gives the 208 staff a chance to both inform and receive comments on the public participation program from EPA and the other 208-related agencies in New England.

This documentation of public participation is condensed from lengthy notes and files kept on every aspect of the 208 planning process. For each public participation mechanism/technique, the following items are discussed:

Time or Frequency: The time devoted to or a frequency for each item is reported.

Public Served: The target population for each mechanism/technique is identified. Listed also are those sections of the public who benefit indirectly from the public participation effort.

Staff Involved: This item documents the fact that the entire 208 staff has been involved in every aspect of the public participation program.

Purpose: Each public participation mechanism/technique is conceived as a way to achieve the objectives and work through the strategies set forth in the OCPC 208 project control plan. The specific goal of each public participation effort is discussed under this section.

Format: For each mechanism specific aspects of organization and structure are discussed.

Materials Generated: Each public participation mechanism/technique has generated considerable materials and information.

This section summarizes the content and character of the materials while appendices A-J contain examples of these materials.

Results/Input to Study: This section evaluates the results of each mechanism and details the impact to the on-going 208 planning process.

A. Citizen Committee on Clean Water

This Committee is comprised of representatives (appointed by town/city government officials) from each OCPC 208 community. Other interested and concerned citizens regularly attend the meetings. Further, representatives from the Old Colony Planning Council attend meetings to serve as a liaison between the 208 Citizens Committee and the Planning Council.

Time or Frequency: One day a month over a five-month period.

Public Served: Elected community officials and the public at large.

Purpose: The primary role of the Citizens Committee is to determine on-going policy for the 208 study. Specifically, they advise the OCPC staff of the political implications of proposed actions; of implementation feasibility of proposed actions. The Committee provides comments and criticisms on the interim reports of the 208 staff and the project consultants. In addition, the Committee also suggests issues in each of the communities to explore and the best means for dealing with them. As such, they maintain close contact with the OCPC staff and consultants on a variety of political and technical questions.

A second important responsibility of the Citizens Committee is to assist OCPC in galvanizing more widespread public participation in each of the local communities. In addition to helping the staff organize the local community workshops, the Citizens Committee representatives make recommendations as to the use of information techniques in their communities, approaches to use, and people to contact.

A third primary role of the Citizens Committee is to address and help resolve conflicts that arise in the study period. Because of its inherent area-wide nature, the Citizens Committee is a logical group to deal with conflicting water goals and issues among the local communities.

Format: Meetings of the Citizens Committee for Clean Water usually include the following kinds of items: (a) update on status of 208 staff and consultants work; (b) presentation of new materials or information (from the 208 staff and/or consultants) for review and evaluation; (c) update on status of public participation program, discussion and evaluation of current mechanisms, and suggestions for new approaches. Each item affords the group an opportunity for open discussion of local and area-wide issues, conflicts, and goals.

Materials Generated: Letters requesting appointments, letters welcoming local representatives, list of members, letters announcing meetings, agenda, and minutes.

Results/Input to Study:

1. Initial identification of local priorities for 208 study.
2. Suggestions for public participation program: how to organize workshops; ways to broaden public contact with the 208 staff and citizens committee; feedback on media releases and workshops.
3. Information concerning local and area-wide issues: local problem areas and areas worth preserving; local issues and conflicts linked to water-related land use, water supply, and wastewater disposal; inter-town issues and conflicts.
4. Comments on and evaluation of 208 staff interim reports have recommended that more background information be provided to committee and general public (e.g., groundwater information paper).
5. Evaluation of consultants' work for the 208 project: suggestions for redefinition of consultants' contracts in order to provide outputs of value and interest to the general public.

B. Clean Water Task Force Technical Committee

This Committee is comprised of appointed representatives from the whole range of state and federal agencies concerned with water quality management. Membership also includes representatives from the adjoining 208-designated regional planning agencies with whom OCPC has Memoranda of Understanding.

Time or Frequency: Meets once a month for the duration of the study.

Public Served: The general public and public officials in the OCPC 208 area, adjoining 208-designated area, the Commonwealth of Massachusetts, and the Nation.

Staff Involved: The entire 208 staff prepares for and attends all the Technical Committee Meetings.

Purpose: The Old Colony 208 Technical Committee plays several important roles in the 208 study. These include:

- provision of technical advice and methodological assistance
- coordination with adjacent and other 208 programs
- coordination with on-going state and federal programs
- coordination with local environmental groups
- provision of a vehicle for data exchange

Format: Meetings of the Technical Committee usually include the following kinds of items: (a) update on the status of the 208 staff and consultant's work; (b) presentation of new materials of information (from 208 staff and/or consultants) for review and evaluation; (c) update on the status of the public participation program. Each item affords the group opportunities for open discussion of the technical, legal, and jurisdictional issues and conflicts in the OCPC 208 study.

Materials Generated: Letters requesting appointments, list of representatives, letters announcing meetings, agenda, minutes, Memoranda of Understanding.

Results/Input to Study:

1. Reviews and evaluates 208 consultants scope of services.
2. Evolves working relationships with agencies with which OCPC has MOU's.
3. Reports on status of work (pertaining to the OCPC 208 project) in state and federal offices.
4. Evaluates interim outputs from OCPC 208 staff and consultants.
5. Provides data (e.g., DWPC water sampling data) necessary to the progress of the 208 project.
6. Suggests ways to involve the public in the 208 planning process.

C. Old Colony Planning Council

The Old Colony Planning Council is comprised of one representative and one alternate from each of the eleven (11) communities.

The Council is the formally designated planning agency to perform the 208 study in the Old Colony area. The Council is being kept abreast of on-going 208 activities by monthly staff reports and by representation on the Citizens Committee on Clean Water. Through these linkages, it provides input into the on-going decision-making activities of the Citizens Committee.

Time or Frequency: The Council meets monthly and makes decisions through a majority vote procedure.

Public Served: Council delegates, town/city officials, Old Colony Water Pollution Control District, and the general public.

Staff Involved: The 208 project manager (or another 208 staff person) attends every meeting of the OCPC.

Purpose: The Council will formally adopt the 208 plan. On a month-to-month basis, the Council performs the following specific roles:

- reviewing monthly progress of the 208 study
- reviewing outputs
- approving contract and budget matters
- relating other Council work elements, such as economic development and housing goals, to the water quality program.

Format: 208 staff person presents for review and evaluation such items as: updates of 208 study progress, contractual arrangements with consultants, staff hiring (during the initial phase of 208 work), interim output reports, etc.

Materials Generated: Minutes from monthly meetings.

Results/Input to Study:

1. Suggests area-wide considerations to be addressed by the study.

2. Reviews budgeting matters and staff hiring.

3. Provides important data on housing, land use, transportation, and economic development for the OCPC 208 communities.

D. Old Colony Water Pollution Control District (OCWPCD)

Representatives from the four member communities meet to plan and discuss progress of future shared wastewater treatment facilities. Planning, design, and construction will occur with the support of 201 funding.

Time or Frequency: Meet once each month.

Public Served: Local officials and residents of the four member communities, residents in nonmember downstream communities in the OCPC 208 area, and residents of neighboring planning districts.

Purpose: 208 staff involvement in the OCWPCD serves the following purposes:

1. Coordination of 201/208 planning programs for maximum benefit and efficiency.

2. Exchange of information of problem septic tank areas, potential sewer service areas, future development priorities in each of the member communities.

3. Representation of issues and conflits in non-member communities that pertain to the efforts of the OCWPCD.

Format: 208 staff people present for review and consideration information on: 208 study progress, and work with 208 and 201 consultants. 208 staff has provided information on population, land use, water supply, natural features, as well as technical information to EPA and other agencies.

Materials Generated: Memorandum of Understanding (See Appendix B).

Results/Input to Study:

- 208 staff and 208 area as a whole kept apprised of OCWPCD planning

- In future, OCWPCD will present plans for sewer service areas, design and construction of treatment facilties, and eventual removal capacities to the 208 staff for evaluation

E. Water Quality Workshops

Water Quality Workshops have been held in each of the ten area communities to inform the general public and town/city officials of the scope and progress of the 208 study as well as to identify the issues and priorities specific to each community.

Time or Frequency: One workshop per community. Held in evening.

Public Served: The general public and public officials.

Staff Involved: Entire 208 staff.

Purpose: The water quality workshops were conceived to serve many purposes:

1. Introduce the community to its representative on the Citizens Committee for Clean Water.
2. Introduce the 208 water quality staff (and on some occasions its consultants) to the community.
3. Explain the nature and purpose of the 208 planning process.
4. Report on the progress of the 208 study.
5. Elicit public opinion of 208 planning and water quality and other issues of major concern to citizens.
6. Explain the importance of public participation and suggest specific ways in which citizens can get involved in the 208 project.

Format: Format of the workshops include: (a) introduction to Citizens Representatives and 208 staff; (b) explanation of the 208 process and how it differs from other planning efforts; (c) slide show to dramatize water quality issues/conflicts in the communities and the region; (d) questionnaire to elicit opinion on wide range of water quality-related issues; (e) open discussion of the 208 project, water quality issues important to local citizens, and other issues raised by the questionnaire.

Materials Generated:

1. Media releases -- sent to the 15 newspapers and three radio stations serving the area to inform general public of time, place, and purpose of the workshops.
2. Letters to town/city officials and boards -- sent to each community to inform of workshop; officials were consulted in selection of date and time for workshop so as to minimize conflicts with scheduled meetings.
3. Letters to local citizen groups -- sent to many environmental and other concerned citizen groups in each community.
4. Letters to high school science teachers -- sent to each local and/or regional high school. Letters included background information on 208 and water quality management in general. Science teachers asked to announce to their classes and encourage their colleagues to attend.

5. Flyers/posters were designed and printed for each community. These were distributed to and posted in many public places in each community (town hall, library, post office, banks, stores, bulletin boards, etc.).

   Name sheet handout -- for each workshop, a sheet was prepared listing the home of the local citizens for Clean Water representative, the OCPC 208 staff, and the 208 consultants. These were distributed at each workshop.

6. Introduction to 208 handout -- a brief explanation of 208 planning was prepared and distributed at each workshop.

7. Sign-in sheet -- each person attending the workshop was asked to sign in and to list his/her address and/or affiliation as they entered.

8. Questionnaire tabulation -- the results of the questionnaire for each town were tabulated on a master sheet. Often questionnaire results varied considerably from opinions expressed in discussion. Thus the questionnaire and the discussion were compared to get a better picture of opinions of those present.

9. Workshop summary -- during the discussion period, 208 staff people took detailed notes on questions, comments, suggestions made, as well as responses to them. The notes on the discussions were checked and summarized in debriefings following each workshop. Summaries also include: (a) date, time, and place of workshop; (b) list of people in attendance with address/affiliation; and (c) format of workshop.

Results/Input to Study:

1. Identify the issues and priorities specific to each community.

2. Meet citizens interested in getting involved in the 208 planning process.

3. Strengthen working contacts with local officials.

4. Identify and visit problem areas and prime resource and recreation areas that should be reclaimed or protected.

5. Discover the level of awareness of local citizens and officials regarding water quality management so that future reports and general information can more closely suit their needs.

F. Discussions with Town/City Officials

The 208 staff consults constantly with local officials (selectmen, planning board, conservation commission, water superintendent, sewer superintendent, board of health) regarding town and area-wide water quality issues.

Time and Frequency: Fifty-eight meetings over ten-month period.

Public Served: Local officials and the community at large.

Staff Involved: Entire 208 staff

Purpose: The purpose of the discussion is to establish and maintain solid working relationships with local officials and to deal with such specific issues as:

1. Informing officials of 208 study and enlisting their support.
2. Selecting sites for the water sampling program.
3. Compiling local land use/zoning controls.
4. Assessing local water supply situation.
5. Collecting information on activities and priorities of each of the boards.
6. Inventorying local sewerage facilities and plans for future wastewater disposal options.

Format: 208 staff travels to local community offices. Formality of meetings varies with the specific situation.

Materials Generated:

1. Sites for water sampling.
2. Information on land use/water quality issues.
3. Information on water supply.
4. Intra-office background sheets on status of town boards, people to contact, issues to study further, potential problems and conflicts.

Results/Input to Study: Have established excellent working contacts with most town officials in each community.

G. Technical Assistance to Town Governments

The 208 staff regularly attends meetings of town committees to advise on technical matters and to coordinate efforts with the main body of the 208 study.

Time or Frequency: Attended an information presentation to five local government bodies over two-month period.

Public Served: Local citizens and officials.

Staff Involved: The entire 208 staff.

Purpose:

- To help communities deal with immediate, pressing water quality issues/problems.
- To build short-term problem-solving capability into the long-term structure of the 208 planning process.
- To inform citizens of the importance of 208 planning in their community and to build support for it.

Format: 208 staff researches the problems, prepares summary technical papers, and reports of findings as requested by the local committees.

Materials Generated:

- Technical background papers.
- Intra-office memos on status of situation as it develops.
- Letters from citizens.

Results/Input to Study:

- Short-term problems effectively dealt with prevent evolution into larger, long-term issues.
- 208 staff has become more deeply aware of water quality-related issues in communities.
- Awareness and credibility of 208 planning process enhanced.

H. Involvement in Local Schools

OCPC 208 area high school and colleges are involved in the water quality project.

Time or Frequency: On-going.

Public Served: Citizens of the OCPC 208 Area.

Staff Involved: Entire 208 staff.

Purpose:

- To build through education and work training an awareness of the importance of water resources and a commitment to protecting and preserving them.
- To inform younger citizens of the role of 208 planning water resource management.

Format:

1. Background information on 208, notice of water quality workshops, and invitation for students and teachers to participate sent to science teachers in all local and regional high schools.
2. Students and teachers from Project QUEST (Brockton High School) attend technical committee meetings and use 208 materials in classroom and field work.
3. Students from Bridgewater State College Department of Earth Sciences and Geography work (part-time) as interns with the OCPC 208 planning staff. Interns involved in nearly every 208 task. (Assignments include land use survey and mapping, water quality data compilation and display, basic research on historical uses of water and former land use/water quality workshops.)
4. Students and professors from Bridgewater State College Department of Earth Sciences and Geography are executing the OCPC 208 consulting contract for water quality sampling. This involves field work (sample collecting), testing of water samples, and data analysis and interpretation.
5. Assist local students with water quality-related terms projects.

Materials Generated: Letters to High School Science Teachers, Bridgwater State College Scope of Services.

Results/Input to Study:

- Information about local communities.
- Assistance in certain tasks in the study.

I. Public Information Program

The 208 staff has established effective working contacts with all 15 newspapers and three radio stations that serve the Old Colony 208 area.

Time and Frequency: On-going.

Public Served: All citizens of the OCPC 208 Area.

Staff Involved: The entire OCPC 208 staff.

Purpose:

- Educate and inform public about the 208 project.
- Report on the progress of the 208 work.
- Notify the public of special events (e.g., water quality workshops).
- Suggest specific ways that the public can get involved in the 208 project.

Results/Input to Study:

- Greater public awareness of 208 water quality project and associated events.
- Positive coverage of all aspects of study by area media.

J. Newspaper Clipping File

A comprehensive file of area newspaper articles pertaining to water quality-related issues at the local, area-wide, state, and federal level is maintained.

Time or Frequency: On-going.

Public Served: The entire 208 staff.

Purpose:

- To keep abreast of water quality news in the area, state, and nation as it occurs.
- To assess the information about water quality reported to the public.
- To check on the effectiveness of the OCPC-208 public information program.
- To check on the coverage afforded OCPC 208 water quality news.

Format: None Applicable.

Materials Generated: Newspaper clippings.

Results/Input to Study:

- Public information program modified to best communicate information about the 208 study.
- 208 staff kept up to date on local water quality-related issues.

K. Distribution of Interim Reports

Information developed by the 208 staff and consultants is made available to the public for immediate inspection and evaluation.

Time or Frequency: Water Supply and Water Use in the OCPC 208 Area

Citizens Committee: summary 1/8/76, copies received 1/8/76
Technical Committee: summary 9/23/75, copies received 1/20/76
OCPC: summary 3/24/76, copies received 1/28/76
Mailing to town boards, state and federal agencies 1/19/76 - 1/23/76

Land Use and Water Quality in the OCPC 208 Area

Citizens Committee: summary 1/8/76
Technical Committee: summary 9/23/75
OCPC: summary 2/25/76
Mailing to town boards, state and federal agencies anticipated 4/76

Phase I Groundwater Maps

Citizens Committee: 12/11/75
Technical Committee: 12/2/75

DWPC Summer Sampling Data

Citizens Committee: 3/11/76
Technical Committee: 12/2/75

Public Served: Federal, state, area-wide, and local officials and representatives and the general public.

Staff Involved: Entire 208 staff.

Purpose:

- Make information available to the public for immediate use.
- Inform citizens of the progress of the 208 study.
- Seek evaluation of the work.
- Assess the level of public awareness of water-quality issues.

Format: Results of 208 staff and consultant work presented to the Citizens Committee on Clean Water, the Technical Committee, and the Old Colony Planning Council. These committees also receive copies of printed materials. Discussion and evaluation is encouraged. All local boards in each community are mailed copies of reports. Comments and criticism are actively sought. Revisions to the interim reports are made as deemed necessary. For example, in discussion of the report on the Phase I groundwater study (done by consultants) at the Citizens and Technical Committees, it was found that all concerned wanted more background information on groundwater and more specific information on how the study was conducted. 208 staff response: (1) with expanded sections on methods and interpretation; (2) the OCPC 208 Staff is preparing a background paper on groundwater resources (not part of the original OCPC 208 Work Plan).

Materials Generated: Citizens Committee Minutes, Technical Committee Minutes; revisions/supplementary reports.

Results/Input to Study:

- Greater public awareness of progress of 208 study.
- 208 information can be incorporated into community management and decision-making.
- Interim reports revised to better suit needs of officials in all involved levels of government as well as needs of local citizens.
- Staff identifies topics for future public information efforts.

L. Visits to Problem Areas with Local Citizens

The 208 staff encourages citizens to take them to inspect, first-hand, sites of real or potential threats to water quality, or resource areas not presently endangered but worth preserving for all to enjoy.

Time or Frequency: Field examination of cranberry bogs, ponds, and related land uses in Pembroke, Hanson, and Halifax - one trip per month for two months.

Inspection of septic systems in Bridgewater with Board of Health - one trip.

Staff Involved: The entire 208 staff is involved in examining and analyzing these specific local issues.

Purpose:

- Learning more about the issues and priorities specific to each community.
- Identifying and documenting for later reference problem areas and important water resources.
- Explaining to citizens the role of 208 planning in water quality improvement, and seeking their support.

Format: Field Work

Materials Generated:

- Photos and notes to document the situation observed.
- Updates to land-use maps.
- Names of other people to contact for further information.

Results/Input to Study:

- Documentation of existing problems for future checks on water quality change.
- Improved accuracy of land use and other maps.
- Greater awareness of local problem areas.
- Increased contact with local citizens.

M. Involvement with Public Participation Programs of adjoining Regional Planning agencies.

The OCPC 208 staff keeps up to date on the progress of the 208 project and the public participation programs in neighboring RPC's.

Time or Frequency: On-going.

Public Served: All the citizens in the OCPC and neighboring areas.

Staff Involved: Public participation coordinator and the entire 208 staff.

Purpose:

- To coordinate public participation and general planning efforts between OCPC and the adjoining 208-designated Regional Planning Agencies.
- To share experiences and ideas among public participation staff as to effectiveness of different approaches to public involvement in 208 planning.
- To coordinate public participation efforts in towns (e.g., Pembroke) with joint OCPC and MAPC membership.

Format: Formal and informal meetings with public participation staff from neighboring RPC's.

Materials Generated: Memoranda of Understanding with neighboring RPC's.

Results/Input to Study:

- Ideas for public participation efforts (both ideas to try and ones to avoid).
- Elimination of duplication of effort in Pembroke.
- Commitment to dealing with water quality issues that cross 208-designated Regional Planning Agencies boundaries.

N. Local Groups

The 208 staff has attended meetings of local groups in the Old Colony area.

Time or Frequency: On-going.

Staff Involved: 208 Project Manager.

Purpose: To apprise citizens groups of the progress of the 208 study, ask for suggestions and comments on the work, seek on-going involvement in and support of the 208 planning process.

Format: Variable, short presentation of 208 planning, importance to the community, ways that citizens can get involved.

Materials Generated: List of citizens interested in fuller involvement in the 208 process.

Results/Input to Study:

208 staff learns more about local priorities for water quality management.

Informs citizens of the 208 project and seeks their participation.

O. Water Quality Mailing List

The 208 staff compiles a comprehensive list of area citizens and groups interested in (or currently working on) the OCPC water quality project.

Time or Frequency: On-going.

Public Served: All citizens of the OCPC 208 Area.

Staff Involved: Entire OCPC 208 Staff.

Purpose:

- To facilitate communications between area citizens and the OCPC planning staff and its consultants.
- To notify citizens of future events, seek review of on-going work, distribute other information, seek local input and assistance.

Format: Individuals and groups organized by towns.

Materials Generated: Comprehensive mailing list.

Results/Input to Study: Contacts with local citizens and information on issues of local and area-wide concern.

CITIZEN INVOLVEMENT ISSUES

As indicated in the Citizen Involvement Mechanisms Section, OCPC is quite active in organizing means by which the public can participate in the 208 study. Similarly, 208 agencies across New England churn out public participation materials and organize meetings to engage public interest. Undoubtedly, there is a considerable amount of energy being expended in the OCPC 208 effort and other 208 agencies to get the attention of the public. To what extent have 208 public participation efforts been successful in the Old Colony area? Is it possible to forsee any potential public participation problems down the road in the 208 process?

While the 208 staff has been quite successful in gaining the public's ear and involving officials and residents in the 208 planning process, the 208 staff is quite aware of previous water pollution control public participation efforts that have often resembled expensive charades. To avoid the pitfalls of other public participation efforts, OCPC continually evaluates its own public participation program. This section examines some of the public participation issues involved in the OCPC 208 program thus far.

Before evaluating our public participation goals, it is useful to review the obstacles that OCPC has faced in its public participation program. Some of these obstacles were perceived prior to the program; others have cropped up as the study has proceeded.

A. Obstacles to 208 Public Participation in the OCPC Area

Each 208 agency has probably surveyed the resources and problems of its study area and devised a public participation program in light of them. In the Old Colony area, several obstacles have faced the OCPC in involving the public in 208 planning:

Existing Water Resources - Lying at the headwaters of the Taunton River Basin, most of the streams in the OCPC 208 area are extremely small and in low-flow periods resemble mere drainage ditches. Only in the Bridgewaters does one begin to see the formation of "real rivers" in the form of the Town River, the Satucket River, the Matfield River, and the Taunton River. In Hanson and Pembroke (which primarily drain into the North River Basin) local residents are fortunate in having many beautiful lakes and ponds to supplement the North River, the Drinkwater River, and the Indian Head River. Outside of Hanson, Pembroke, and Bridgewater, however, usable and large water resources are the exception.

It is difficult to get the public excited about water quality management when the region lacks highly visible water resources or a large unifying river. Indeed, to some officials, water quality management in the OCPC 208 area may only be important in terms of cleaning up and preserving downstream areas. Many of the streams and rivers that do offer potential aesthetic enjoyment to residents have been ignored by poor land-use planning. This is particularly true in the Taunton River Basin communities where factories and commercial areas back up to streams. In the less populated areas of the Taunton River Basin, public enjoyment of water resources is often precluded by lack of public access. In the lakes and ponds of Hanson and Pembroke, the problem has been somewhat different. Private residences have often clustered around a water body, but again public access for some water bodies is a problem.

To combat the general low awareness of water resources by most of the population in the area, the OCPC 208 study has made substantial effort to link water supply issues to the 208 study. In particular, the necessity for preserving small streams from pollution where the streams are hydrologically connected to groundwater aquifers has been stressed. All of the communities in the area depend on unpolluted groundwater in one way or another. The recreational value and potential of small lakes and ponds in each of the communities have also been stressed. Finally, in some communities, like Abington, Whitman, and Bridgewater, it has been possible to gain the public's ear through sewage-related problems.

Water Pollution Control Planning - One problem that the 208 staff has faced in the water quality project has been the problem of relating 208 planning to other water pollution control efforts. For the average citizen, as well as many local officials, the different planning elements of the 1972 Federal Water Pollution Control Amendments (P.L. 92-500) are a confusing bureaucratic maze. Sections 208, 201, 401, and 303(e) have been arrayed before them and it is difficult to sort out their differences, their purposes, and their relationships. Add to that the complicated net of state, regional, local, and federal involvement and it is easy to understand the comprehension problem. In the OCPC 208 area, the legacy of the SENE study is an additional complicating factor.

OCPC, through its handouts, workshops, and visits to local officials, has been conscious of this obstacle and made an effort to relieve the confusion. The complexity of various water quality efforts has the potential to remain as an obstacle throughout the study, however, as various Section 201 planning efforts are completed. In order to minimize the potential conflicts with these efforts and to ensure public perception of 208 as an integrated planning process, OCPC has taken great pains to involve 208 planning with current 201 efforts in the region. Memoranda of Understanding have been executed with Avon and the Old Colony Water Pollution Control District (OCWPCD) whereby a portion of the work is being performed under 208. In addition, 208 is funding the industrial wastewater recovery portion of the Brockton 201 work. Finally, 208 is supplying much of the original input for a 201 Step I study just getting underway in West Bridgewater. Similarly, on the other side of the ledger, the OCPC 208 study will be using many of the 201 outputs rather than duplicating the work.

On a broader scale, it is also somewhat difficult for the public to perceive the relationship of 208 planning to other water-related planning efforts; i.e., wetlands protection, environmental health, water supply planning, recreation planning. It is frankly confusing even to the planners in attempting to sort out jurisdiction questions. To dramatize this entanglement, a section in the Water Supply and Water Use in the OCPC 208 Area report reveals the complicated relationships and issues possible in a hypothetical pollution problem in the area. To some extent, the OCPC 208 Technical Advisory Committee will help to keep the different planning relationships in perspective.

208 Planning Schedule - While 208 planning offers a vehicle for integrating various water pollution control programs, it is a complex program. Combined with the EPA-mandated two-year planning period, the 208 planning process offers a potentially overwhelming job of integrating many planning elements. OCPC, like all of the 208 agencies, is already behind schedule to some extent in its planning schedule. As the study period progresses, there is the very real danger that the public will suffer from "planning shock" as alternatives and recommendations are churned out.

Water Resources Constituency - Allied to the first obstacle discussed is the lack of a viable broad-based watershed association in the Taunton River Basin portion of the OCPC 208 area. The existing watershed group, the Taunton River Watershed Association, has a small but dedicated membership. Several of the key people from the watershed group are associated with the 208 study. In the North River area of the 208 study area, there is a very active and capable North River Watershed Association. Several members of this group are also allied to the OCPC 208 study.

An option prior to the start of the OCPC 208 program was the possibility of using the watershed groups as the primary sole vehicles for the OCPC 208 public participation effort. While this option has a lot of merit and is being done in other 208 areas, it was discarded in the OCPC 208 area for two important reasons. Neither group has sufficient broad-based membership to ensure that opposing viewpoints could be aired. To channel OCPC's 208 public participation program primarily in the hands of two groups with strong environmental views offered the potential of precluding pro-development factions from airing their opinions. More importantly, as explained later in this section, the OCPC 208 program has attempted to establish ties with those with local implementation ability in an effort to involve many different "publics" in the 208 study. To limit the major thrust of its 208 public participation program to a watershed group, would have placed an additional layer between the technical planning effort and the many "publics" in the OCPC 208 area.

Previous Water Pollution Control Planning - Unfortunately, 208 planning, like many planning efforts, has to live and deal with previous planning efforts that are suspect in the eyes of the public. In the Old Colony area, there is a strong skepticism on the part of the Bridgewaters, for instance, concerning the Brockton Treatment Plant discharge. For a variety of reasons, planning efforts have not yet resulted in an implemented remedy for this pollution source. Since it has had a harmful water quality impact for several years, downstream communities are understandably skeptical about getting involved with another water quality program. In particular, the public is skeptical about dealing with pollution sources in their community when nothing has been apparently done to remedy the worst offender in the region.

OCPC has had to carefully explain the Brockton situation and what is being done about it to the downstream communities. As the Brockton facility goes to Step 2 and Step 3 phases, OCPC will have to ensure that, for the first time, downstream communities are kept informed of the progress. More importantly, OCPC will have to ensure that there is no compromise in the upgrading effort such that water quality objectives are compromised.

Some communities are also skeptical about previous planning related to the establishment of the OCWPCD. In particular, East Bridgewater residents and officials are reluctant to participate in the 208 study because they believe that the 208 study is a trojan horse for sewering the town. OCPC has attempted to tailor the technical aspects of the 208 study to deal with the issues that East Bridgewater is concerned about (namely, upstream pollution, groundwater, water supply, land use impacts), but has thus far met with a healthy suspicion on the part of the community.

Home Rule Influence - The OCPC 208 area has had mixed success with regionalism. While there are many examples of regional cooperation, there is still a strong feeling on the part of some communities that problems can and should be solved locally. OCPC has made a concerted effort in its workshops to dramatize the hydrologic relationships between communities and to stress the importance of planning together to resolve water quality problems. One of the mechanisms to air inter-community conflicts and problems is the Citizens Committee on Clean Water. As alternatives and recommendations are formulated, this Committee will be confronting many conflicts in an attempt to balance differing community viewpoints.

B. Evaluation of OCPC 208 Public Participation Objectives

While it is premature to fully evaluate OCPC's success in meeting its public participation objectives, it is possible to briefly review the experiences involved in addressing those ojbectives.

Objective #1: Develop on-going public participation mechanisms to involve the public in 208 planning.

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As summarized in the section on Citizen Involvement Mechanism, a variety of mechanisms have been developed by OCPC to involve the public in the 208 planning process. Recognizing that the "public" in the Old Colony area cannot be reached by two or three mechanisms, the OCPC staff has agressively worked in the first few months of the program to develop several public participation mechanisms. The diversity of mechanisms also recognized the fact that not only are there different publics to be served -- local officials, ad hoc and special interest groups, and the general public -- but several mechanisms allow public participation with varying intensities. The Citizens Committee on Clean Water and the Technical Advisory Committee, for example, meet monthly; local workshops will be held three or four times within the planning process; meetings with local officials and groups are held continually on an as-needed basis.

Of all the OCPC 208 public participation objectives, this is perhaps the easiest to measure. Prior to June, 1975, the opportunities for the general public to influence water quality planning in the Old Colony area were relatively limited. Occasional public hearings on NPDES permits were the only official mechanisms. In addition, two local watershed groups offered a vehicle for dealing with specific issues. The 208 planning process has greatly expanded opportunities for public participation in water quality planning in the Old Colony area. The number of new mechanisms now available is not the only important measure; rather, OCPC's public participation program has gone beyond the simple "public relations" aspects of public participation. Indeed, much more effort has been placed on receiving public input than in "selling" 208 planning.

One of the more important mechanisms for getting public input and feedback in the early stages of OCPC's 208 program has been the local Water Quality Workshops. The local workshop was conceived with the notion that 208 planning would only be successful in the Old Colony area if local issues were emphasized as well as area-wide interrelationships. The public had to be convinced that 208 was not just another fuzzy area-wide study. In addition, credibility for OCPC's role would be enhanced by meeting the public on their own turf. In each workshop, local benefits of 208 planning were highlighted. The workshops have also acted as a catalyst in terms of promoting the other public participation mechanisms. The local Citizens Committee on Clean Water representative was introduced and the representative's role explained. In addition, the workshops have resulted in citizens and officials requesting OCPC participation in local water quality-related groups of OCPC assistance with local issues.

In terms of the latter activity, OCPC has thus far been responsive to local request for participation in or technical assistance for on-going and immediate issues. As indicated in the previous section, OCPC has responded to requests to deal with a proposed landfill site in Pembroke and a new landfill site in Rockland. In addition, it has committed staff time to the Easton Sewer Study Committee, the Abington High School Sewerage Study Committee, the Bridgewater Board of Health, and the Abington Park and Recreation Department for specific issues. These additional activities are viewed with mixed emotions by OCPC. On the one hand, they drain staff time from scheduled 208 tasks. This has resulted in missing certain work accomplishment deadlines. On the other hand, they have given OCPC an opportunity to get additional credibility in the local communities and to receive additional information and ideas from local residents and officials. OCPC will continue to respond to local requests for assistance and participation as much as possible.

Despite the number and variety of mechanisms available for public participation, OCPC has yet to reach certain sectors of the public. The interests of developers, industrialists, agriculturalists, and cranberry bog owners have not been full represented in the first phase of the water quality project. As the 208 study begins to deal more directly with these interests in the next phases of the study, ad hoc mechanisms for participation will be developed.

Objective #2: Develop public awareness of water quality issues and problems.

Given the lack of major rivers in many parts of the Old Colony area, OCPC anticipated a major effort in developing public interest in water quality issues. As previously mentioned, one strategy developed by OCPC was to broaden the focus on stream and river water quality to the more comprehensible issues of water supply protection and water-related recreation. It is relatively difficult to determine whether the 208 effort has succeeded in elevating the water quality consciousness of the general Old Colony public. There have been a few indicators that at least reveal some hopeful signs.

First of all, the opportunities for greater public awareness of water quality issues have been expanded by the increased coverage given to the OCPC 208 effort by the local media. The workshops, as well, have served an important education function. Each workshop featured a verbal presentation, a visual presentation, and a written handout of water quality issues and the 208 program.

The workshop discussion periods and the questionnaire results offer to some extent indicators of overall public perception of water quality issues. In some workshops, discussion with residents indicated that residents were indeed more sophisticated about some water quality issues and relationships than previously thought. Perception by residents of sewerage impacts on land use and water supply existed in most workshops. The written responses in the workshop questionnaires also revealed a greater knowledge of certain water quality issues than expected.

Objective #3: Involve the public in the technical and policy aspects of 208 planning, including goal definition and plan selection.

The true indicator of a successful public participation program is the extent to which public ideas and comments are integrated into the planning process. Public participation mechanisms and water quality publicity in themselves are only means to the goal of incorporating public viewpoints in 208 planning. Thus far, the OCPC public participation program has helped to provide technical and policy guidance on the following specific issues:

- public participation strategies
- sampling locations
- water supply issues
- sewerage impact issues
- groundwater issues
- upstream pollution sources
- specific sources of non-point pollution
- local sources of technical information

At this stage of the 208 study, the transmittal of information and policy between OCPC and the public has been relatively smooth. It is expected, however, that as specific proposals emerge from the 208 planning process that conflicts will emerge. As these proposals are generated, the true strength of the OCPC public participation mechanisms in resolving conflicts will be tested. It has become evident already in the workshops and in the meetings with the Citizens Committee on Clean Water that each community has clear priorities which the 208 study should address. Conversely, the message in some communities has been equally clear in terms of what constraints will face the 208 planning process. For example, there is great skepticism in East Bridgewater about public sewerage. Consequently, alternative non-structural solutions are being considered in greater earnest for those communities with sewage problems. In Avon it has become quite clear that public sewerage will be unacceptable if it will worsen the already difficult water supply situation in town.

Objective #4: Develop public support for implementation of the 208 plan.

The bottom line of the OCPC 208 public participation program is, of course, the implementation of an acceptable water quality management plan for the Old Colony region. The OCPC 208 public participation program has been designed to maximize the implementation ability of the 208 planning process. The on-going Citizens Committee on Clean Water is comprised of representatives of the governing authority from each community. This direct tie to local implementation authority is important. Equally important, has been the involvement of local conservation commissions, water superintendents, and planning boards. By working with these local implementation authorities, OCPC hopes to build strong local support with those community officials who can do something to implement 208 proposals. Not only have all of these local boards been consulted for technical information and local priorities, but each major community board will be receiving appropriate outputs as they are published for review and comments.

OCPC has worked hard to establish formal ties with the 208 programs in the area. Formal memoranda of understanding with the Brockton, Avon, and the Old Colony Water Pollution Control District 201 efforts have been established. By integrating the 208 process with the local 201 efforts, OCPC is attempting to ally itself with local implementation programs.

Finally, the workshops and the Citizens Committee on Clean Water have been effective in delineating the political limitations of 208 planning efforts. In short, the public has enlightened OCPC as to what issues and proposals to avoid as well as steering us into issues that will enhance 208 credibility and implementation ability.

THE PUBLIC INVOLVEMENT PROGRAM
SANIBEL ISLAND, FLORIDA

APRIL - AUGUST 1979 *

This case study demonstrates that public participation, contrary to its occasional reputation as an inhibitor of decision-making, can greatly speed such activities as permitting processes when well-executed.

Background

During the 1970's, the regulatory authority of the Corps of Engineers, under Section 10 of the River and Harbor Act of 1899 and Section 404 of the Federal Water Pollution Control Act of 1972, was greatly expanded. The workload increased accordingly and was demanding more and more of the District's resources. Most acute was the need for manpower. Administering the program, processing applications for permits (increased from 860 in 1970 to 3,929 in 1978), and ensuring compliance with the Congressional intent were all undeniably requiring increased manpower and were equally essential to the proper execution of the program.

The Jacksonville District's first attempt to meet this crisis was to increase the use of general permits throughout the State. General permits offered economy on processing, were more responsive to the general public, provided environmental safeguards by their stated conditions, and gave land use "certainty" to landowners. In short, they made sense and should have been appealing to the public and the District alike.

During the fall of 1978, the Jacksonville District developed two general permits for south Florida. Since they were expected to receive little opposition, the responses to the public notice came as a shattering blow. The comments were universally negative. Everyone from the large developers to the dogged environmentalist as against these permits and several of the specific conditions were attacked by both ends of the spectrum. This attempt had failed.

Clearly, a more innovative approach was needed. The District turned to the public as a possible resource in the problem's solution, reasoning that if the various concerned interests could be brought together in an atmosphere of mutual trust and communication, perhaps an agreeable solution could be found. It worked successfully in project planning, why not in the regulatory program?

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*Reprinted from The Public Involvement Program on Sanibel Island April-August 1979. U.S. Army Corps of Engineers, Jacksonville District, 1980.

The District would apply public involvement techniques to develop likely areas for developing general permits. The thrust of the program had two immediate goals. First, it was hoped that there would be broader public understanding of the regulatory program, general permitting, and the public involvement process, and second, it was hoped that once general permits were approved there would be a reduction in the workload to allow for the better allocation of resources to cover the more significant regulatory problems. It was anticipated that both goals could be accomplished within the scope of the initial program.

The Selection of Sanibel Island

Considerable thought went into selection of the public involvement program's first area of consideration. Among the factors weighing upon the selection were the cumulative impact of the proposed general permit, the type of activity and its regulatory authority, the overall cost effectiveness of the program and its relative probability of success. Of the several candidates, a general permit for limited fill activities on Sanibel Island soon emerged as the front-runner.

Sanibel Island was attractive for a number of reasons. First, the interior wetlands of the island were substantially similar and the total cumulative impact of the permit was expected to be minimal if the special conditions were properly structured. In addition, the Jacksonville District had assumed jurisdiction over the area in 1975 and was averaging six to eight permits per year. An initial estimate showed that the benefits could be worth the initial costs.

The political climate of Sanibel was more interesting. In response to the development pressures of the 1960's and 1970's from Lee county, the citizens of Sanibel had overwhelmingly approved a referendum for incorporation. The city was incorporated in November, 1974 and the new city government immediately issued a moratorium on new building permits. Two nationally recognized companies, a planning organization, and a law firm assisted the city in developing a new policy for growth. The Conservation Foundation was later added to this team to ensure environmental interests were considered. The team directed its efforts toward devising a strategy for "conserving (the Island's) threatened land and water resources, its beaches and mangroves, its drinking water and wildlife - in a word, its remarkable quality of life" and produced Sanibel's Comprehensive Land Use Plan (CLUP) in July, 1976.

The CLUP has achieved national recognition as one of the first and finest attempts to relate growth to ecological limits. It is also the basis for all land-use planning and zoning on Sanibel Island and was relied on substantially for the development of the general permit.

Most important to the public involvement program was the attitude of the citizens of Sanibel. They are environmentally sensitive, active in local affairs, sophisticated, and responsive to change. Moreover, they had shown some interest in developing a general permit for the interior wetlands. The citizens of Sanibel turned out to be one of the program's greatest assets.

The Design of the Sanibel Process

With Sanibel as the selection for the first regulatory public involvement program, the next step was the design of the process needed to attain the forementioned goals. To assist the Jacksonville District in this critical task, the Institute for Water Resources was relied on for advice and assistance and a team of consultants was retained. The consultant team consisted of a leader with overall responsibility, a planner responsible for the integration of the Sanibel Comprehensive Land Use Plan and the proposed general permit conditions, and a team member who interviewed Corps personnel to determine goals and objectives and assisted in preparing materials for the workshops. An additional specialist was retained to conduct an independent evaluation of the workshop process.

The District Engineer, Colonel James W. R. Adams, met with the team leader and formulated the initial strategy of the program. Four workshops were to be held, with each building on and further refining the work of the previous meetings. The final product would hopefully be completed in the fourth workshop and soon thereafter be circulated by a public notice. The response to the public notice would be a key factor in the final determination on issuance.

Each workshop would begin with a meeting of all the participants and subsequently be broken into groups of from seven to ten people. The larger group meeting would handle general administrative matters and address the questions and problems of the participants as a whole. The smaller group meetings were to be working sessions directed toward finishing a set of assigned tasks. Later in the day, the smaller groups once again combined and reported to each other what they had accomplished during the workshop. A Corps of Engineers spokesman would close the meeting with a few remarks on what was to be accomplished in the next workshop.

Each of the smaller groups would be assigned a Corps of Engineers facilitator, whose function would be to make everyone feel included and keep the participants focused on the issues. This was a difficult job, particularly since the facilitator had to remain neutral on the context of the issues. How well the facilitators performed and related with their group would directly affect the success of the program. To help ensure their success a training session for the facilitators was scheduled to teach the candidates the essentials, but they would be expected to learn much during the workshops. To a person, the facilitators did exceptionally well. Interestingly, many strong relationships were formed between the facilitators and their group members.

The initial strategy was considered the basic framework for the program, but flexibility would remain the key. Minor adjustments were continually being made to meet the needs of the program and the participants. The framework was strong, however, and remained intact throughout the entire program.

Preparation for the Workshops

In the four-week period between the initial planning meeting and the first workshop there was a flurry of activity within the Jacksonville District. Mailing lists had to be developed, letters of invitation sent, and suitable facilities for the meetings found. In addition, facilitators were carefully selected, briefed on the overall program, and sent through a training program established especially for the Sanibel public involvement program. Simultaneously careful coordination was being made with the various concerned agencies and the local government and, lastly, press releases on the coming workshops were issued and valuable contacts were made with the press through correspondence and personal conversations.

While the District was preparing for the meeting, the consultants were interviewing the various important actors to the process. The respondents included personnel from the Jacksonville District, local officials, city planners, and leaders of the environmental community. The interviews proved to be valuable in providing a better idea of what to expect at the first workshop, but more importantly, they eased some of the local fears that the program was a Corps of Engineers' "trick." The interviews also later proved to be invaluable in providing a base for the independent before/after evaluation.

The Workshops

The first workshop was held on 3 May 1979. Colonel Adams began the workshop by briefing the approximately 50 attendees on the Corps' jurisdiction over the wetlands, the general permit process, and the new public involvement process in which the citizens were soon to participate. An important part of Colonel Adams' presentation was his sincere assurances to the assembled citizens that no decision on the issuance of the general permit had been made, nor would it be made until after the series of workshops had been completed and public comments were received in response to the public notice; that the District Engineer would accept or reject in total the consensus of the workshop participants as to the language of the special conditions under the general permit; and that all views would have ample time to be aired and taken into consideration.

A question and answer period followed the initial briefing and several citizens did not hesitate to announce to one and all that they were suspicious of the proceedings and even more suspicious of the effect that the general permit would have on Sanibel's ecology. Although at least one rather vocal citizen firmly asserted his opposition to any general permit on Sanibel Island (interestingly enough, this same citizen later became the most vehement supporter of the general permit), most of the participants elected to take a wait-and-see attitude.

The workshop participants were randomly assigned to one of six work groups after the question and answer session and then were introduced to their facilitators. The facilitator took them to their work area and explained his role and that of the group recorded. Additionally, he asked participants to write on a piece of paper (1) why they were there and (2) what their expectations from the day might be. This short introductory exercise was an important part of the independent evaluation and served as a short breaking-in period for the group.

The facilitator then explained that the product of the first workshop was to be a set of tear-sheets which would document the group's scoping of all the possible issues to be considered in the formulation of the general permit. Each group's efforts were to be later reported to the other groups.

When the working groups reassembled into the large meeting room, it became evident that the results were remarkable. As the spokesmen for the groups delivered their synopses, it became clear that all groups agreed upon the same basic problems to be solved, although each group managed to "scope" at least a few issues that were overlooked by the other groups. Even more remarkable was the unsolicited testimony of several participants in regard to the success of the process and in easing some of the suspicions on what the Corps might have "up its sleeve." Colonel Adams made the closing remarks and thanked the participants for attending.

Immediately after the workshop, the information from the tear-sheets was analyzed. The team of consultants was responsible for synthesizing, refining, and categorizing the range of problems into four main issue areas. There were (1) administration of the permit, (2) specifications of the fill material, (3) impacts on the environment, and (4) education and public awareness. This report formed the basis for the second mailing to the workshop participants and enabled them to recap the issues of the first workshop and start thinking about the issues and tasks of the next meeting.

The second workshop was held two weeks later. As with the first workshop, the participants initially gathered in the larger meeting room to discuss administration details and to be briefed on the tasks to be accomplished during the day. Later each of the four smaller groups started its own working session and concentrated on one of the four specific groups mentioned earlier. Their task was to write specific language for the special conditions and by the end of the day, when the groups had regathered, it was evident that the first draft material for the special conditions had been prepared.

Between the second and third workshops, the consultants refined the tear-sheets of the workshop, and the District mailed the participants the result -- the first draft of the special conditions of the general permit. The participants of the third workshop about two weeks later were asked to address all the issues under consideration and further refine the language. Consensus was reached smoothly by the end of the day and groups were very close to a final draft of the general permit. After this third workshop, the work group's tear-sheets were synthesized and the final draft mailed to each of the participants.

The fourth and final workshop was held after another two-week period. The several citizens who had emerged as the leaders within their work groups were asked to serve as a panel answering questions concerning the permit. The give-and-take between the panelist and the audience was informal and produced only a few minor changes in the language of the general permit. The proposed general permit was now ready to be released by a public notice.

The Public Notice and Comment Period

The public notice for the Sanibel general permit was circulated and incorporated the language of the special conditions developed at the workshops. The response was refreshing. Only five letters were received and two of these praised the permit and process. The remaining three letters recommended minor changes which were incorporated into the permit after a consensus agreement was reached by telephone conversations. The permit was then issued. From the first workshop to the issuance of the permit, the program took four months -- less time than many individual permits take to get issued. By any standard the program had to be considered a success.

The Independent Evaluation

From the conception of the program it was felt that an independent evaluation would be fundamental to gauging the strengths and weaknesses of the program and judging if the goals and expectations of the various participants were reached. The initial interviews conducted prior to the first workshop showed that the Sanibel public officials, developers, and Corps of Engineers personnel were generally sympathetic to the issuance of a general permit. They felt it would speed up the permit process and provide some certainty to the development of the area. They also felt that the Sanibel Comprehensive Land Use Plan (CLUP) would provide sufficient protection for the interior wetlands.

Environmentalists, on the other hand, believed that the requirement that a landowner obtain an individual Corps of Engineers permit was a protection they wanted to retain. The environmentalists were predominately neutral, and in some cases negative, toward the issuance of a general permit. They wanted to protect the wetlands and participate in any decision that would affect the wetlands.

Through the use of these interviews, questionnaires distributed at the second and fourth workshops, and personal observations, Dr. Rosener concluded the program had lived up to the goals and expectations each group had stated before the workshops had begun. The "image of the Corps was enhanced, the Corps was able to get an indication of citizen desires about protection of the wetlands, the Corps shared their decision-making authority with citizens, a general permit was issued, the Corps and local government will share enforcement responsiblities, and Corps personnel were trained in being neutral workshop facilitators. And as was anticipated, the workshops eliminated the need for a public hearing on the Sanibel general permit. Similarly, the goals of the environmentalists were also achieved. Wetlands will be protected by the general permit conditions, citizens did have an opportunity to write their own permit conditions, and certainty about development constraints has been provided to environmentalists, landowners, and public officials on Sanibel.

The independent evaluator went on to say that the overall program would have to be considered a success, although this would not guarantee future successes.

Benefits Versus Costs

The cost effectiveness of the program will certainly be a key consideration in the continuation of the program. Accordingly, the costs were carefully monitored and all charges were placed in a special account. It had been fully anticipated that the cost of the initial program might be somewhat high due to the many "start-up" costs, but expenses for such areas as training and the use of the consultants should be considerably reduced or eliminated in future programs.

On the other hand, the calculated benefits may be artificially low since many of the intangible benefits were not given a monetary value. These are very important benefits and should not be overlooked. Certainly, the Jacksonville District has gained excellent public relations, an increased public awareness of the regulatory process, a promise of increased public cooperation, a greater acceptance of general permits, a public constituency for the Corps of Engineers, land use "certainty" for landowners, and a better understanding of the needs and wants of environmentalists concerned about wetlands protection. The intangible benefits may ultimately prove to be the greatest benefits to the Jacksonville District.

The total benefits derived from the program are $62,931. The total costs were $41,257.99. The benefit/cost ratio derived from these calculations is 1.53.

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Conclusions

By most measures the Sanibel Public Involvement Program would have to be considered a success. This does not mean future programs will be as successful or even a success. It does mean we have learned a great many things and have begun to learn how to apply them successfully. Future programs should certainly add to this knowledge.

The future of public involvement in the Jacksonville District looks bright. Presently, we are planning a similar series of workshops to develop criteria for the wetlands of southeast Florida. These are expected to begin in January. Other programs are expected to resolve potential conflicts and develop advisory recommendations for the direction to be taken on potentially controversial projects.

COMMUNITY INVOLVEMENT SHAPES A HIGHWAY: THE REDESIGN OF NASHVILLE'S I-440

1957 - 1980*

This case study addresses the doubts of those who disparage the impact of public participation on project design and outcome.

In recent years concerned citizens have been playing a greater and greater role in shaping the government programs and projects that most directly affect them. Increased impetus has been given to community involvement by the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA), which sets forth requirements for getting the public involved early in the decision-making process. (See specifically 40 CFR 1506.6)

Public involvement has been an integral part of the Federal-aid highway program for many years. Supplementing the regulatory material in the Federal-Aid Highway Program Manual, State Action Plans contain the mechanisms for getting the public involved, for keeping the public informed, and for utilizing the public's input. Moreover, experience with community involvement has led to improved highway projects.

A very fine example of how input from the public helped to shape a controversial highway proposal can be seen in the community involvement effort that has taken place on the I-440 project in Nashville, Tennessee.

Like many states during the early years of the Interstate program, Tennessee wanted to get the most road for its dollars and thus opted to construct the rural sections of its Interstate network before completing the more expensive urban sections. And like many other states, Tennessee's long-range plans were short-circuited by NEPA.

As early as 1957, the Tennessee Bureau of Highways held a public hearing on the location of the Interstate System in Nashville, which included the proposed I-440. This portion of the Nashville Interstate network was planned as an outer loop to improve crosstown transportation in the southern portion of Nashville (see map). In 1958 the basic plans for the location of Nashville's Interstate System were approved by the Federal Highway Administration (FHWA) and by the city of Nashville. I-440 was planned to connect three legs of Nashville's urban Interstate System: I-40 west, I-65 south, and I-24 east.

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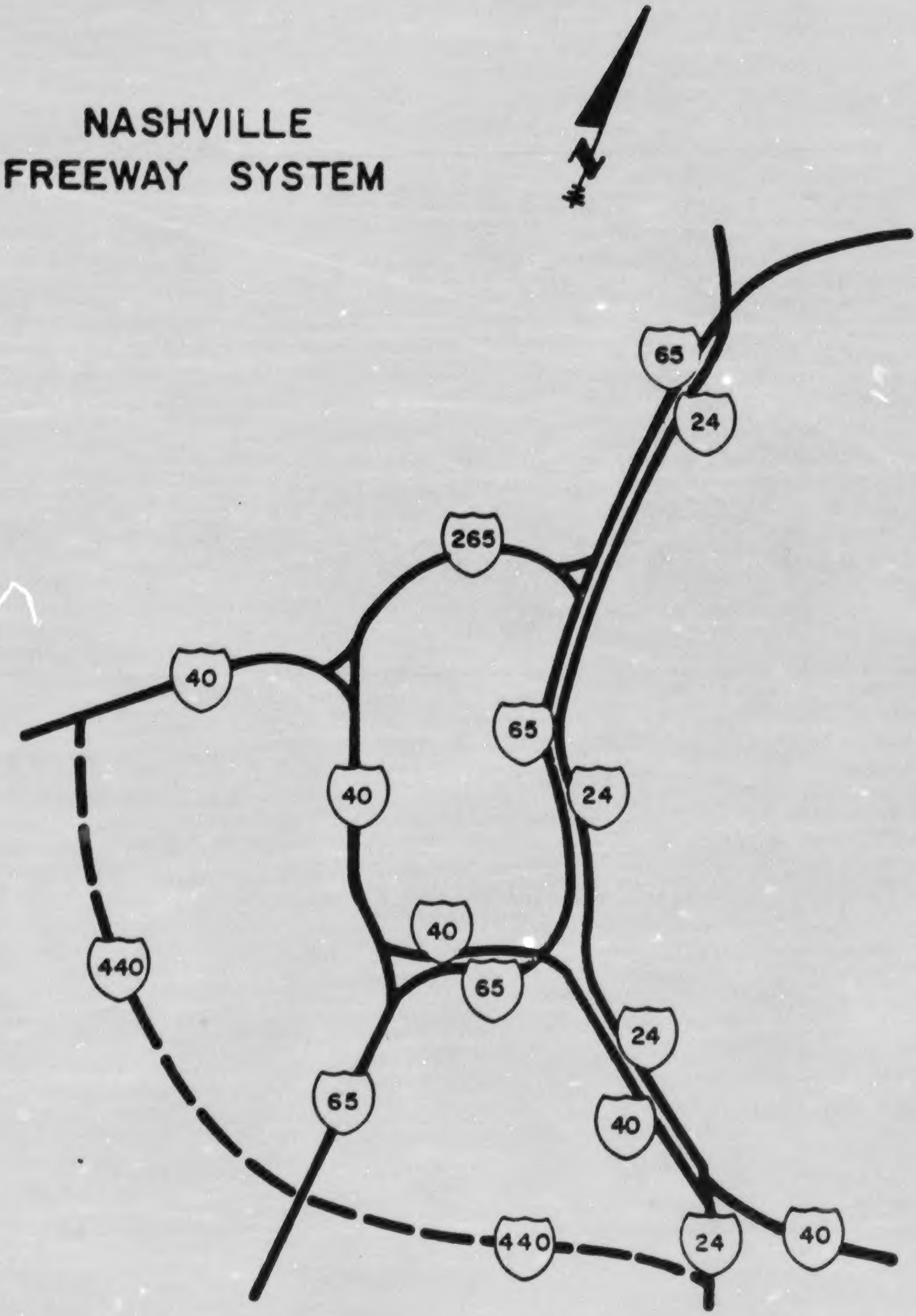
*Reprinted from Environmental Action Plan Report, Number 10. U.S. Department of Transportation/Federal Highway Administration, 1980.

NASHVILLE
FREEWAY SYSTEM


N
65
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265
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40

In 1964 the FHWA approved a six-lane section of I-440 from I-40 west to I-65 south. In 1968 and 1969 design public hearings were held, and between 1969 and 1973 most of the right-of-way acquisition and relocation had taken place, and the property was cleared.

NEPA was enacted during this period, but the FHWA believed that because of the advanced stage of the I-440 project an environmental impact statement (EIS) was not required. However, as a result of a class action suit filed by the National Wildlife Federation against FHWA, the courts determined that the preparation of an EIS was necessary for projects in which a substantial Federal action remained; I-440 was back to square one.

Unprepared for this setback, the Tennessee Department of Transportation (TennDOT) decided to proceed with other projects and left the I-440 proposal temporarily in abeyance. In the mid 1970's TennDOT decided to reactivate the I-440 proposal. Tennessee officials attended meetings with neighborhood groups who were just beginning to express concerns about the I-440 project. Based on the negative responses received at these meetings, it soon became apparent to TennDOT that a more effective means of citizen participation would be required in order to completely reevaluate I-440. Early help from the Metropolitan Planning Commission was sought for this reevaluation. That agency began a comprehensive study of the project to determine if an urban freeway was still the appropriate solution to crosstown traffic problems.

Nearly 20 years had passed since I-440 was included in the Nashville Interstate System, and in that time several strong organizations had developed, both in support of the I-440 project and against it. Some of the opposition developed after the second segment of I-440 (from I-65 to I-24) was redesigned from four to six lanes in 1974.

The TennDOT began looking for the most effective way to reach the greatest number of citizens along the I-440 corridor. About this same time, the Administrator of the Tennessee Bureau of Highway Environmental Planning Division, attended a pilot course sponsored by FHWA on "Community Involvement in Highway Planning and Design, Phase II." Believing that the techniques suggested at this course would facilitate the kind of interaction and citizen participation he was looking for, the administrator contacted the consultants that had put on the course and enlisted their assistance in preparing a series of workshops.

Instead of having the public come to a meeting and be talked to, the workshop format encourages maximum citizen participation by permitting the public to do most the talking and suggesting. Because of the controversy surrounding the I-440 project as it was finally proposed, TennDOT decided to approach the project from a fresh perspective. TennDOT believed that the workshop format would provide this new approach and facilitate the development of a project that was in tune with community desires and community values.

Four workshops were originally planned to be held on Saturdays at four different locations along the I-440 corridor. A fifth workshop was added, on a different day of the week (Thursday evening), to afford those individuals unable to attend Saturday workshops an opportunity to participate.

At the outset, TennDOT tried to make it clear that the purpose of the workshops was not to present arguments for completing I-440 but rather to solicit the views of the community. In order to accomplish this, Mr. Smith tried to make the meetings as informal and as open as possible. Admittedly, because of the vocal opposition of an development in the I-440 corridor, Mr. Smith and his colleagues were somewhat apprehensive about the first workshop. "We were scared," he says. "We really didn't know what to expect. I felt somewhat like Daniel must have felt before he went into the den of lions."

In retrospect, Mr. Smith admits that if he had the workshops to do over again, he would try to better prepare the public about what to expect. If the public had known more about what was to be expected of them, Mr. Smith feels that the first workshops would have run smoother with less open hositility and less initial public scepticism. Many individuals who attended the first workshop were unhappy with the workshop format. They had come prepared to argue their views before the entire assembly, and when they were asked to break up into small groups for table top discussions, some were reluctant to do so.

Others were unprepared for the openness of the meetings. They had come expecting TennDOT to take charge of the meeting and to tell the public what decisions had been made on the I-440 proposal. These indviduals were rather surprised when they became the focal point rather that TennDOT. Some attendees were upset with Mr. Smith and other TennDOT officials because they felt that their specific questions about what TennDOT proposed were being evaded or ignored. What these individuals failed to comprehend was that these workshops were intended to be informational in nature and not a forum for TennDOT to explain its proposal.

However, in terms of achieving their purpose, Mr. Smith believes that the workshops were very successful: "The purpose of these meetings was to give citizens a chance, early enough in the process, to influence the outcome." The far-reaching influence that citizen input had in shaping the final proposal for I-440 will be discussed later. A long-time opponent of I-440 attended the first two workshops. She had high praise for the way that TennDOT conducted the meetings and presented the I-440 proposal. Moreover, she felt that Mr. Smith conducted the workshops in a fair, interesting, and impartial manner. Says Mr. Smith, "We tried to make the meetings interesting enough to get to the silent majority." Judging from the diversity of suggestions and opinions expressed at the workshops, one would have to term them successful.

Another attendee was even more impressed. He says that the citizen input at the workshops permitted TennDOT to "look at alternatives they had never conceived of. I wish this kind of interaction between the community and TennDOT had been done 15 years ago."

Using the workshop format, the participants broke into groups in order to compile a list of ideas, solutions, and suggestions concerning Nashville's crosstown transportation problems. Each list was recorded by one member at each table in a session appropriately called "brainstorming."

After discussing the items on the list, the group ranked the items from most important to least important. Then each table presented its findings to the whole assemblage. Ben Smith admits that one of the problems with the workshop format was that the opponents tended to sit together and the proponents tended to do the same. But because each side was given an equal opportunity to present its position, both groups benefited.

Mr. Smith admits that the meetings probably caused very few individuals to change camps, but he feels that everyone came away with a deeper understanding and appreciation of each other's views. This was underscored by a member of an organization against construction of I-440. Although opposed to the project on the grounds that TennDOT's basic transportation assumptions are inaccurate and outmoded, the citizen admitted, nonetheless, that the workshops "raised questions that allowed the State to write a better environmental impact statement."

At the end of each workshop, the participants were given a questionnaire to fill out (pages 215-217). These questionnaires gave TennDOT an additional barometer to use in its evaluation of I-440 proposals. They also gave those individuals who were unable or unwilling to talk to the entire group a chance to present their ideas and concerns.

Several months after the final workshop, Mr. Smith's office prepared a Summary of I-440 Community Workshops, which was distributed to all those who filled out registration cards at the workshops. This document was just what its title suggests: a summary of the comments and suggestions that were expressed at the workshops. Below are two pages from the report -- one listing some of the positive effects of constructing I-440 and one listing some of the negative effects.

Comments Concerning Good Effects

- relief of traffic on residential streets - put heavy traffic on highway designed for it, not a residential street
- present design most sensible and economic way to ease crosstown travel problem, building it with fewer lanes would help but would eventually need widening
- better safety for residential areas due to less traffic
- improved access for emergency vehicles, particularly for hospitals, but also for fire and police vehicles
- complete the Interstate and Defense Highway System in Nashville
- school zones on Woodmont Blvd. and Thompson Lane - I-440 will relieve traffic and improve safety of school children
- will save millions by building it now instead of waiting: we'll have to have it sooner or later
- present plan of using Tennessee Central Railroad minimized disruption
- not building highway would be unfair to those whose homes were bought and cleared for this purpose
- if Woodmont Blvd. widened and I-440 not built, land would only be good for commercial use, people would no longer live there
- less trucks on residential streets
- why widen crosstown streets when that will not relieve the crosstown traffic problems?
- putting loop further out does not serve major traffic generators and would be too costly
- any alternative to I-440 is inadequate in every respect
- provide new jobs
- enable Woodmont Blvd. to be a neighborhood street as it should have been all these years
- shorter travel time in getting from one part of the city to another
- better traffic flow will save fuel
- fact that it was not completed five years ago is another example of bad faith on the part of the federal government

Comments Concerning Bad Effects

- destroy stable, integrated, middle-class, inner-city neighborhoods
- older homes will be abandoned and allowed to deteriorate
- speculators will build stores, offices, and apartment complexes
- isolation between neighborhoods - city's best neighborhoods would be split
- greenery would be destroyed
- plant and wildlife destroyed
- adverse effects on downtown business - benefits surburban shopping centers
- decrease residential property values
- rise in crime because of easier access to neighborhoods
- rise in crime due to dead-end streets
- will be concrete where there should be vegetation
- more auto traffic will cause more fuel to be wasted
- destruction of nature
- I-440 fits into the environment of LA and NY not Nashville
- inadequate drainage will cause flooding
- reduce incentive to upgrade public transportation
- unsightly chain-link fences
- commercialization near interchanges and then spreading in residential areas
- too large, too immense to fit into surrounding environment, perhaps fewer lanes would reduce bad effects
- loss of neighborhood stability
- creates more problems than it solves
- visual pollution

Included in the summary was a section entitled "What Has TDOT Learned from These Meetings?" The first paragraph reads as follows:

> One of the unexpected benefits has been a remarkable amount of informal communication that has developed between the Department staff and the community. No longer is the community viewed as a series of census tracts or traffic analysis zones, but rather as neighborhoods in which we know many of the residents and better understand many of their concerns. Conversely, for many of the participants, TDOT is no longer an unknown entity composed of faceless engineers and planners, but people they know on a first-name basis.

More specific items of community concern were also listed. The most important were land use, air and noise pollution, and traffic flow. Other important issues which surfaced were the effect of the energy situation on transportation; how I-440 fits into the comprehensive transportation plan for Nashville; that an adequate evaluation be given to all reasonable alternatives to I-440; that construction impacts of the recommended alternative be considered; and finally, many individuals expressed the need for continued citizen involvement in the development of a proposal for the I-440 corridor.

Two other features of the workshop summary are worthy of mention. One is that TennDOT reported its findings about how individuals learned of the workshops: "Overwhelmingly the participants learned about the community workshops through the media and strongly indicated that we (TennDOT) continue using the media to inform citizens of future meetings." Questionnaire results showed that direct mailings and the use of strategically placed posters were not very effective methods of notification.

The summary also contained the following page, which made it easier for citizens to continue to voice their concerns to the individual who would ultimately make the final decision for TennDOT.

Eddie Shaw, Comissioner
Tennessee Department of Transportation
Nashville, Tennessee 37 219

Dear Commissioner Shaw:

Concerning crosstown transportation in the southern portion of Nashville, of which I-440 is one alternative solution, I wish that you would consider:

Sincerely,

Near the end of the workshop summary report was a section entitled "Where Do We Go From Here?" This section briefly discussed the steps that remained in the I-440 development process, one of these being the preparation of a draft environmental impact statement (EIS). The TennDOT tried to impress on the workshop participants that their suggestions would be utilized in the preparation of this document.

This was no hollow promise. After giving due consideration to the hundreds of comments and suggestions that were submitted by the public, TennDOT significantly changed the scope and the design of the I-440 proposal, as well as its approach to developing an EIS. In other words, the effects of these meetings were more far-reaching than the development of a single project. Some of the specific changes that were suggested at the workshops and eventually presented in the final EIS are:

A. An alteration in the emphasis given to subjects to be covered in the EIS. More emphasis was given to the following:

  1. An analysis of the current and projected energy impacts.
  2. A section of safety.
  3. A section of the future of the automobile.
  4. Consideration of land use and property values.
  5. The transporting of hazardous materials.

B. The consideration of a new alternative: the Boulevard.

C. Major design changes.

  1. The addition of a bikeway along part of I-440.
  2. Additional crossing of I-440 in order to alleviate the separating of neighborhoods.
  3. Elimination of parallel side roads.
  4. Elimination of an interchange at Granny White Pike, a highway listed on the National Register of Historic Places.
  5. A major reduction in the scope of the facility from six lanes to four lanes.
  6. A major shift in the design of the facility to a below-ground level "parkway."
  7. The construction of a plaza structure where the bikeway crosses I-440.
  8. Commitment to monitor land use around the historic district.
  9. Alteration of access for the First Church of Christ Scientist.
  10. More than usual landscaping to enhance the beauty of the I-440 parkway and attention to architectural design of structures and bridges.

TennDOT's public involvement effort did not stop with the workshops. The Commissioner's office sent out many news releases to update the progress on I-440, and officials from TennDOT continued to meet with community and civic organizations. There is little doubt, however, that the informal informational workshops played a key role in the shaping of the final I-440 proposal. A poll conducted in December, 1979, by an independent pollster, revealed that 61% of the Nashville population favored construction of I-440, and only 14% were opposed (25% had no opinion). This overwhelming support for a highly controversial project highlights the success of TennDOT's community involvement efforts.

I-440 DISCUSSION GUIDE

EACH TABLE SHOULD CHOOSE 1 PERSON TO BE THE GROUP RECORDER

Your group discussion on the following questions will help the Tennessee Department of Transportation to better understand important neighborhood places and community activities that could be affected either by completing I-440 or by not building I-440. This is also an opportunity to describe what alternatives you feel should be considered.

To help us understand your community and your concerns involving this crosstown transportation problem, please discuss the following question in your groups and write down your ideas.

This group brainstorming process has been used productively for group discussions in a variety of situations. This process helps a large number of people to be able to use their time effectively in focusing on problems and solutions.

The process involves the following steps:

- PRESENT THE QUESTION for discussion.
- BRAINSTORM a list of ideas, solutions, suggestions,
- DISCUSS, CLARIFY, AND COMMENT on the brainstorm list,
- ASSIGN PRIORITIES to items in the brainstorm list.

The purpose of the brainstorming is to get everyone's ideas on paper before the group begins to discuss or debate. In this way, the discussion does not get bogged down on one idea before all the ideas have been suggested.

Hints for Brainstorming:

- Recorder writes down everyone's ideas in large letters on the chart paper.
- Do not discuss or comment during the brainstorm.
- Work as quickly as possible.
- After all suggestions, then discuss the pros & cons of each idea.

Assigning priorities to the results of each question is a method that allows groups at other tables to know what your table thinks is important. Either the recorder or another person at the table may report back to the group the results of each table's discussion. At the end of the meeting we will tape the chart paper on the wall so that you may walk around and look at the results of other groups. Do not be concerned if others at your table do not think that your idea is important. By leaving your individual responses with us each person's ideas can be studied on its own merit.

Suggestions for Assigning Priority:

- Recorder at each table asks each person to think of the three ideas he or she considers most important.
- Recorder then asks each person what they consider 1st, 2nd, and 3rd most important.
- Using the chart paper, Recorder puts three marks by the idea each considers most important, two marks by the 2nd most important, and one mark by the 3rd most important.
- After asking each person their opinion and marking the ideas on the chart paper, the idea with the most marks would be most important, second most marks the second most important, and so on.

After all the community workshops have been held, a summary of the meetings will be sent to those who attended any of the workshops and filled out a registration card. In this manner you will know the ideas and concerns of other neighborhoods. These ideas will be forwarded to the Project Review Committee within the Department, since some of the suggestions may require further technical evaluation. The Draft Environmental Impact Statement (DEIS) will reflect the citizen suggestions as well as provide citizens another opportunity for input. Citizens are welcome to comment on the DEIS as well as speak at the public hearing following the circulation of the DEIS.

I-440 INDIVIDUAL QUESTIONNAIRE

1. a) Do you live on property next to the I-440 right-of-way?

______ Yes ______ No

b) In what neighborhood do you live (or nearest street intersection)?

____

2. What best describes your personal feelings about I-440?

______ For completing I-440
______ Against completing I-440
______ Generally for I-440, but concerned about some aspects
______ Generally against I-440, but would like more information
______ Interested but have not formed an opinion
______ Indifferent - don't care one way or the other
______ Other ____

3. If you checked the block indicating "concerned about some aspects", please list those aspects you are concerned about.

____
____
____

4. a) Do you think that noise along I-440 will be a signficant problem?

______ Yes ______ No

b) If noise is a problem, what method of noise abatement would appeal to you?

______ Landscaped earth mound along the edge of the highway
______ Buffer zone - buy more homes and businesses along the right-of-way.
______ Pleasantly designed and landscaped walls
______ Elimination of heavy trucks from the highway
______ Soundproofing homes and businesses
______ Depressing the highway in sensitive areas
______ Other ____________________________________

5. a) In your opinion will I-440 improve or restrict access in your travel:

	Improve	Restrict	No Change
To work			
To shopping places			
To school			
To religious activities			
To social or recreational activities			
To medical services			
Other - ________			

b) If any blocks are indicated as "Restrict", write the street name or general area: ________

6. Do you anticipate that construction activities relating to I-440 would cause you problems? If so, to what degree?

	Severe	Moderate	No Problem
Difficulty in travel			
Noise			
Dust			
Utility interruptions			
Heavy equipment in the area			
Other - ________			

If you have any suggestions how these problems could be reduced, please discuss. ________

7. Do you think that building or not building I-440 would result in undesirable changes in the present land use characteristics of your neighborhood? If so, where and what kind of changes?

If I-440 is Built	If I-440 is Not Built

8. Based on what you know about I-440, do you think that the proposed interstate highway fits into its surrounding urban environment in an acceptable manner? If not, what changes would you like to see made?

9. a) How did you learn of this meeting?

   b) How do you think the Department can best inform citizens of community meetings?

MEDIATION IN FLOOD CONTROL FACILITY PLANNING *

Mediation is a relatively unexplored technique of public participation. It holds much promise for use in highly conflictual situations. The following case study portrays the usefulness of mediation in just such a circumstance.

Preview

This is a description of how mediation was used as a tool to reach agreement on the construction of a flood control dam on the fork of a major river basin in the northeast region of the United States. The issue of the dam triggered concern among a variety of recreation, farm, environment, and government groups. Outside mediators were able to assist in the identification of plans which could be accepted by the major parties-at-interest and implemented by pertinent government officials.

For several decades, periodic spring flooding along the lower basin of this major river had occurred with some regularity. The farmers along the basin valley and residents in small communities had become accustomed to the spring floods. In more recent years, residential development had begun in the attractive valley. This increased the number of persons affected. In the early 1960's, a major flood again ravaged the valley, destroying important farmlands and many homes in the region. In response to this serious incident, the Army Corps of Engineers was asked by the State to conduct a study and to recommend construction of flood control facilities which would prevent future incidents.

The study was completed by the Corps and public hearings were held on the plans for construction of a permanent dam on the center fork of three major forks which fed the river. The plans, which had been developed with little public input, met unpredicted stiff opposition from several quarters. The controversy caused the Governor of the State to ask for a re-study, which would include the viewpoints of various affected or interested parties. This was done. Subsequently the Governor announced that no dam would be built. This was interpreted as a victory by those opposing the dam. However, as time passed, many, including the Governor, realized that this was not an acceptable solution. The next flood promised to destroy farmland as it had done in the past and even more residential property which existed because of the increased development in the valley. For this reason, the Governor invited mediators to find an acceptable flood control strategy which could be built without the conflict, controversy, and political repercussions associated with earlier plans.

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*Reprinted from Effective Citizen Participation in Transportation Planning, Vol. I, Community Involvement, by G. Jordan, S. Arnstein, G. Gray, E. Metcalf, W. Torrey, and F. Mills. Arthur D. Little, Inc., for Federal Highway Administration.

Critical Issues

The critical issues related to the problem include:

- the type of flood control facilities which would be allowed (flow-through dam, levees, etc.).
- location of the facility; which fork of the river would be chosen and where.
- how much impact upon the river basin was acceptable in environmental terms.

Critical Actors

There were eight critical actors involved.

- The Governor - The Governor was the single most powerful figure. He had the power to veto recommendations or he could commit the State to implement a plan. His position was not clear to other parties of interest. He had once vetoed a dam but now prepared to consider new proposals which might prevent flooding if it did not trigger political repercussions for him. All parties understood the Governor was the key to getting something done.
- Army Corps of Engineers - Officially, the Corps was a neutral element in the proceedings which provided expert information. The analyses, plans, and recommendations made by the Corps had triggered the latest uprisings, but the Corps now indicated it would comment on the technical feasibility of different proposals, and would not back any particular position. However, it was well known that a proposal which the Corps considered technically or economically unacceptable would be difficult to fund with Federal funds.
- Farmers - Small family farms rather than large corporate farms were located in the study area. Their interests were most forcefully articulated by one of their peers who had served as a County Commissioner and possessed political influence which could occasionally be felt state-wide. Their position was simple. They wanted protection from potential flooding but the solution could not place valuable farmlands under the water of a large reservoir.
- Recreationalist - Boating, camping, and fishing enthusiasts formed the main body of recreationalists. They had enjoyed the river for many years and were adamant in their concern about the welfare of the fishing stock and the character of the river whose swift currents were negotiated in canoes and kayaks.

- Environmentalists - The distinction between environmentalists and recreationalists was sometimes blurred by their similar concerns. However, the environmentalists tended to have a broader concern for the entire river basin, its natural character, and the biological function which the river plays for the basin area. They were vocal, organized, and sophisticated in negotiation. Trained and assisted by the Sierra Club, they had demonstrated their strength by forcing the Governor to reject the original dam plan.

- Land Developers - The potential for development along the banks of the river had been recognized and exploited early. Expensive vacation and second homes had sprung up in the least dangerous areas. These were primarily the retreats for city residents or retirees, who wanted to enjoy life in the natural beauty which the river basin area afforded. Permanent control of the flooding would theoretically open the door to further building. Many individuals felt the farmers would quickly succumb to the high prices offered for their land if a development boom was launched.

- River Basin Residents - Residents of the small towns located in the river basin area had adjusted to the periodic flooding of their streets but welcomed relief. In their ranks were the small buinessmen who were supported by the farm and tourist interests. Their concern was primarily one of survival and protection.

- Mediators - The mediators were the critical agents for review negotiation, consensus-building, and decision-making. They did not consider themselves to be neutral vehicles for registering the views of different parties. They were involved to mold, fashion, and force consensus behind recommendations which could be supported and implemented. Two mediators worked on the problem. One had been raised not too far from the area and possessed a working history of the problem as well as feeling for the people involved.

Participatory Process

Mediators were called in to do the following:

- help define issues and areas where concensus could be reached;

- serve as communicators between groups, within groups, and to the press and public;

- focus discussion only on promising avenues of discussion that had potential for being implemented;

- facilitate negotiations between parties.

Mediators first established the ground rules for the process and built their acceptability. Mediators got the Governor to agree that he would support the decision reached by the mediating parties. The Governor also agreed to keep close contact with the mediators and to alert them when the recommendations were going in a direction which it would be impossible to support. Next, mediators established their credibility with farmers, environmentalists, recreationalists, developers, etc. Negotiations would have been terminated if the critical actors rejected the service of mediators.

With the preliminary steps completed, the mediators helped organize a task force of representatives from critical groups. Each group was polled and asked to nominate one of their peers who commanded enough respect to earn the group's support for a recommendation that had been developed with his help and which he favored. By doing this with each group, a mediation task force was organized with which mediators worked. It should be noted that the group was a citizen group which did not include government representatives.

Results and Analysis

The mediation produced a plan for construction of a dam on a different fork of the river then was proposed originally by the Corps of Engineers. This recommendation was accepted by the Governor and he appointed an interim committee comprised of members of the mediation task force and appropriate government agency representatives. The plan has retained the support of representative groups involved, even though individual members have expressed dissatisfaction.

The entire mediation process took one year of weekly and monthly meetings, some of which lasted until 2:00 a.m. Participants consistently reported they continued to work only because they thought their work would be implemented and because of a sense of respect and commitment to the mediation group which developed.

Mediators unearthed areas of compromise by forcing the group to reexamine their most crucial positions and identify points for which there could not be a compromise from those for which some compromise was acceptable. Mediators also required task force members to meet with their representative group and formulate recommendations which they could accept rather than continue objecting to recommendations advanced by others. This proved to be a painful experience for some but it forced deliberations and negotiations onto a positive track. Each time a plateau of tentative agreement was reached on an issue, the task force returned to the group which they represented to elicit reaction and to identify new areas for work. Task force members were encouraged by the mediators to remain flexible and keep their options open. However, this was not always possible. Early in the deliberations considerable effort was invested by some of the environmentalists in striking any attempt to put a dam on the center fork of the river. This later turned out to be the best place for the structure, but environmentalists were unable to get their groups to accept a change.

The mediation approach revealed much confusion, and misconception existed about the positions of various groups, even though the principal actors had been dealing with the issue for many years. For example, environmentalists mistakenly thought that farmers were in favor of development along the area because it would increase the value of their land. The mediations revealed that farmers were equally opposed to development and eagerly accepted initiation of zoning or other methods which would keep the area agricultural.

Several participants indicated their meetings were successful because they were private. By this time, the participants had reached the decision that some flood control structure was imperative. However, they needed a negotiating environment which permitted them to examine the consequences of different positions and concessions. This had not been possible in the public hearing setting because spokesmen guarded their real thoughts and opinions while under the glare of the press lights.

The mediation process raised the major issues. More important, mediators were able to force participants to specify priorities and to communicate real values and needs versus rhetoric. For example, kayak enthusiasts recognized that the dam was not their central concern. The quality of the river for boating purposes was most important. Once this group was assured a facility could be constructed which would not diminish the character of the river, they were in a position to achieve consensus.

Conclusions

Under proper conditions, mediation can facilitate reaching consensus among opposing citizens groups. All participants felt mediators improved communication, identified potential areas of consensus, and facilitated negotiation in a way that would not have been possible without them. However, it should be emphasized that the following favorable conditions existed: (1) major parties were committed to formulating recommendations which could be implemented; (2) the issue had been thoroughly researched and examined by many of the participants before mediation began; (3) participants had strong assurance that their recommendations would be the governing recommendations, and that they would be implemented; (4) participants had faith in the integrity, skill, and power of the mediators to deal with the negotiation.

Mediation is not the answer to all conflicts and should be used sparingly. The mediators emphasized that part of their effectiveness rested in the fact that participants viewed the mediation as a special, last-resort effort by the Governor to resolve the controversy.

THE PINE CREEK WATERSHED PROJECT *

By William M. Crowe

Where did the recent concept of public involvement in environmental policy come from? Quite apart from its philosophical base in town meeting democracy, the concept emerged from a growing recognition that environmental planning and action can founder in the absence of community citizen education. Probably no agency has come to this realization more clearly than the USDA Soil Conservation Service in its attempts to implement PL 566. This is the case study of an Ohio small-watershed project that has been at a stand-still since 1973 precisely because of "the public's general lack of knowledge about the project in the early stages, and the lack of public participation in planning and implementation."

Introduction

The Pine Creek Watershed Project is a Public Law 566 (PL 566) project located in southeastern Ohio. PL 566 projects consist of a combination of soil and water conservation measures on private and public land on an area no larger that 250,000 acres (391 mi^2). Dams and other structural measures on upstream tributaries may also be included.

These structural and non-structural measures may combine to constitute a multiple-purpose project. Projects of this type may include benefits such as flood control, erosion and sedimentation control, improved water supply for irrigation and for municipal and industrial uses, improved drainage, enhancement of fish and wildlife, and increased opportunity for fishing, boating, hunting, swimming, picnicking, and camping.

PL 566, The Federal Watershed Protection and Flood Prevention Act, was enacted in 1954. PL 566 projects are based on (1) local initiative and responsibility, (2) state review and approval of local proposals and opportunity for state financial and other assistance, and (3) federal technical and financial assistance.[1] Local enthusiasm, however, is the prime mover for a successful PL 566 project. The plans are developed locally, and conflicting interests in the use of land and water are aired and discussed at public hearings.

The United States Department of Agriculture's Soil Conservation Service (SCS) administers the watershed program. The federal government gives technical help in planning and installing the project measures and shares the cost of other measures. It also lends money to sponsoring organizations.[2]

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*Reprinted from Environmental Education in Action III: Case Studies of Public Involvement in Environmental Policy. Clay Schoenfeld and John Disinger: ERIC/SMEAC Clearinghouse, The Ohio State University, Columbus, Ohio. 1978.

The Pine Creek Project is currently listed by the SCS as being on "inactive status" because of local opposition to the project. Inactive status means that federal technical and financial assistance for Pine Creek have been withdrawn. This immediately brought the project to a complete halt in 1973, since the federal government provided such a large share of the total cost and technical assistance for the project. According to local SCS officials, further reinstatement of the Pine Creek Project is only a remote possibility because there exists such strong local opposition to the project.

Figure 1 details the chronological sequence of events concerning the Pine Creek Project that have taken place from the initial planning stages up to the present time.[3] Many of these events are more fully discussed as the paper progresses.

Historical Perspective

Application for the Project

The initial plan for watershed protection, flood prevention, municipal and irrigation water supply, and recreational development in the Pine Creek area was drawn up by a group of local sponsors. These sponsors included the Jackson, Lawrence, and Scioto County Soil and Water Conservation Districts, the Lawrence and Scioto Boards of County Commissioners, the City of Ironton, Ohio, the Village of South Webster, Ohio, and the Pine Creek Conservancy District. The Pine Creek Conservancy District was formed to become the legal sponsoring organization for the Pine Creek Project. Its functions and responsibilities are examined in more detail later.

Formal application for the project came on May 1, 1964, to the Ohio Water Commission of the Ohio Department of Natural Resources (ODNR) for review and approval. In their letter of application the local sponsoring organizations assured the Ohio Department of Natural Resources that there was a great deal of local interest in and support for the project.

The application stated that the proposal was discussed with local organizations to obtain reaction and approval and support before application was made. The sponsors contacted local farm organizations, county agricultural extension agents, local town and city administrators, civic clubs, local industry, county commissioners, county school superintendents, sportsmen organizations, managers of the U.S. Forest Service, and members of the Dean State Forest Service. The application stated that the reaction received from all of these groups and individuals ranged from favorable to very favorable.

FIGURE 1: SEQUENCE OF EVENTS OF THE PINE CREEK WATERSHED PROJECT

Official application by local sponsors to State Department of Natural Resources for project approval	May 1, 1964
Preliminary investigation by U.S. Department of Agriculture SCS completed	October, 1965
Planning approved by SCS	January 10, 1966
Pine Creek Conservancy District formed	Early 1966
Workplan approved by SCS	July 19, 1968
Project authorized by SCS (PL 566 funds authorized).	August 27, 1969
Ground-breaking ceremonies for first dam and lake.	April 17, 1971
Ohio Department of Natural Resources notices deterioration of local support: Many letters to state and federal agencies Letters to local newspaper Letters to local and state representatives.	January, 1972
The 7300 watershed landowners notified by the Pine Creek Conservancy District as to each landowner's share of the cost of the project	February 20, 1972
Concerned Citizens of Southern Ohio (CCSO -- the primary opposing interest group) formed.	Early 1972
Opposition prepared and presented detailed report to Ohio Department of Natural Resources which included allegations against Pine Creek Conservancy District and other statements of opposition	February, 1973
Ohio Department of Natural Resources withdraws its support due to lack of local support	August 10, 1973
Soil Conservation Service withdraws its support and puts project on inactive status.	September 6, 1973
Southern Ohio Improvement League formed (SOIL--primary interest group of proponents)	September, 1973

Proponents of project institute letter-writing campaign to ask state and federal agencies for reinstatement	September, 1973
Pine Creek Conservancy District prods SCS to perform environmental impact assessment and pushes plan to obtain reinstatement	Late 1974 and Early 1975
Findings of the State of Ohio Attorney General's investigation of operation of Pine Creek Conservancy District made public and reprimanding letter sent to Conservancy District	September 15, 1975
The CCSO attempts to get Pine Creek Conservancy District dissolved	October, 1975
Letter from Ohio Department of Natural Resources Director Teater to all Ohio Conservancy Districts concerning the increasing erosion of public confidence in governmental bodies at all levels--uses Pine Creek as an example	December 16, 1975
Court decision of CCSO vs. Pine Creek Conservancy District ruled against CCSO. Upheld constitutionality of Ohio Conservancy Act	September, 1976
Public meetings started up again by Pine Creek Conservancy District to gain local support, but with little response or interest	March, 1977
Trustees of Decatur Township declare their official opposition to project	April, 1977
Trustees of Elizabeth Township declare their official opposition to project	April, 1977
Pine Creek Conservancy District applied to Ohio Department of Natural Resources for an additional loan	April 4, 1977
Loan application rejected by Department of Natural Resources on the basis that there has been no progress toward accomplishment of District goals	April 21, 1977
CCSO loses major court battle--U.S. Supreme Court lets stand a lower court decision upholding Ohio's use of conservancy districts to handle water management	June, 1978

Most of these contacts were made with organized groups, individuals with political obligations, and leaders of the community. No mention was made in the application concerning discussing the proposal with individual landowners of the watershed -- those persons who would be most directly affected by the project. Upon receiving and reviewing the application submitted by the local sponsors, the Soil Conservation Service began their preliminary studies of the area. These studies would determine if PL 566 funds could be authorized for the Pine Creek Project. The studies were conducted in 1964 and 1965, and in 1966, planning was approved by the SCS. Therefore, the Pine Creek Project was at the point officially entitled to PL 566 assistance.

Project Description

The Pine Creek Watershed is a roughly triangular-shaped area of 117,800 acres (184 mi^2) in the southernmost parts of Ohio.[4]

Eleven flood prevention reservoirs were planned. These included seven single-purpose flood control structures, two reservoirs for flood control and water supply, and two flood control-recreational reservoirs, along with approximately 57 miles of channel improvement. Non-structural land treatment measures were planned for implementation on about 16,000 acres to control erosion and sedimentation.

It was estimated that the project would take eight years to complete. A total of 98 families were to relocate.[5]

The SCS stated that when the structures were installed, average annual floodwater damages would be reduced 71 percent.[6] Agriculture benefits to 6,570 acres on 265 farms were projected, along with benefits to 18 miles of highways and 6 miles of railroad. Also noted were significant protection to 32 homes and two commercial establishments, and average reduction in damages to the total watershed amounting to $125,680 annually (1972 estimate).

Project Cost Allocation and Benefit-Cost Ratio

Of the 117,800 acres of project lands, 80 percent is privately owned, 18.5 percent is national forest, and 1.5 percent is state forest.[7] The federal government pays the full cost of implementing and maintaining the watershed project when the project is on public lands. It also assists with the costs of other lands.

The total cost of the project and cost allocation are given below.[8] The 1968 figures represent the initial cost estimates, while 1974 figures represent an update.

	Total Cost	PL 566 Funds	Other (local and state
1968	$ 8,414,265	$3,457,331	$4,956,934
1974	10,332,089	4,190,109	6,132,079

A 1977 cost update set the total project at $12,500,000

In February, 1972, the Pine Creek benefits were set at $18,000,000. This resulted in a benefit-cost ratio of 2.2 to 1. The local share of the $8,414,265 was set at approximately $1,000,000. This cost was for land acquisition and administration of contracts. These figures for the local share were set by the Pine Creek Conservancy Board of Appraisers.

A court ruling in March, 1975, held that the Pine Creek Project costs for the local share were below the benefits. The court listed local benefits at $1,180,530.94 and local costs at $961,390.

Benefit-cost hearings were demanded by the primary opposing interest group, Concerned Citizens of Southern Ohio (CCSO). These opponents asked for a re-evaluation of the benefits and costs, this time taking into account all adverse environmental effects that would result from implementing the project.

The Pine Creek Project was authorized before the National Environmental Policy Act (PL 91-190) was put into effect (January 1, 1970). But since the project was still in the implementation stages after this date, this Act required that an environmental impact statement be prepared. (All federal agencies spending federal funds on a project are required under this Act to prepare an environmental impact statement to any display detrimental effects that the project may have on the environment. This report is to be made public.)

However, an environmental impact statement was never prepared because public support for the project continued to deteriorate, and the SCS (the agency responsible for preparing the impact statement) withdrew its support.

The Resultant Conflict and Its Outcome

Introduction

In January and February, 1972, less than one year after construction had begun on the first of the eleven flood prevention structures, letters began pouring into agencies at the local, state, and federal levels in opposition to the project. The letters also attacked the Pine Creek Conservancy District in relation to its organization and the way it had been conducting business. It was during this time period that major local interest groups played key roles.

Identification of Primary Interest Groups

The Pine Creek Conservancy District (PCCD). The PCCD was formed in 1966 to become the legal sponsoring organization for the Pine Creek Watershed Project. It is a local unit of government with its own power and authority as prescribed in the Ohio Conservancy Act to legally and properly execute the Pine Creek work plan. This Act provides for financing through benefit appraisals and grants the use of eminent domain for acquiring land.

Therefore, the PCCD is the legal agency for providing the local responsibility to:

1. Acquire land, easements, and rights-of-way needed for structural measures.

2. Contract or arrange for letting of contracts for structural measures.

3. Obtain agreements from landowners to plan and apply soil and water conservation measures on the land.

4. Operate and properly maintain the structural works.

The PCCD consists of a Board of Directors, which includes President, Vice-President, Secretary, and Director. These positions are filled by court appointment.

The Southern Ohio Improvement League, Inc. (SOIL). SOIL was formed in September/October, 1973, immediately after state and federal support for the project was withdrawn. This group is made up of proponents who have attempted to promote and arouse public interest in favor of the project since it was declared inactive in September, 1973. Its membership consists mainly of residents from the lowlands of the watershed area. The objective of SOIL is to re-obtain active status for the Pine Creek Project.[9]

The Concerned Citizens of Southern Ohio, Inc. (CCSO). This organization was formed in early 1972 when major opposition to the project became apparent. Its membership, ironically, consists primarily of watershed landowners from the same lowland areas of SOIL's members. CCSO's members do not want to give up their homes and property for a watershed project in which most of them do not believe. The CCSO was able to form a strong and effective force of local opposition to the project and to the PCCD, which ultimately resulted in withdrawal of state and federal support in September, 1973. The two main objectives of the CCSO at the time it was formed were 1) to halt any further work on the Pine Creek Project and 2) to see the PCCD dissolved.

The Sierra Club and Rivers Unlimited are two well-known environmental organizations that gave support to CCSO via letter-writing campaigns and possibly financial support for the court suits filed by CCSO. Having these nationally recognized environmental interest groups speak out on behalf of the CCSO provided additional support in the effort to stop the project.

The Local Conflict -- A Brief Account

The time-line sequence of events (Figure 1) suggests that very little if any opposition to the project was apparent prior to January/February, 1972. In the early months of 1972, local, state, and federal officials began to notice a definite deterioration of local support for the project. The Ohio Department of Natural Resources (ODNR) was flooded with letters from residents of the watershed area requesting information on the watershed project and the PCCD. This in itself might be an indication that the public was not well informed about the project by 1972.

Further, area newspapers such as the Ironton Tribune, The Portsmouth Times, The Lima News, The Columbus Citizen-Journal, and The Cincinnati Post and Times carried many articles and letters that were in opposition to the project. The authors of these articles and letters cited a variety of reasons for opposing the project. Some of the major concerns included:

1. Homes are being taken away without full explanation or just compensation.
2. Those people on a fixed income cannot afford further taxation.
3. The people of the area have been kept in the dark about the project.
4. The project will benefit only a very few people, while all the residents within the watershed will be assessed to pay for the project.
5. There is a lack of need for the series of water impoundments designed for flood control.
6. The failure of the PCCD to conduct its affairs openly and to allow for reasonable public input from all segments of the community.

The 7300 landowners inside the watershed boundaries were notified on February 20, 1972, by the PCCD as to their individual shares of the cost of the watershed project. This served as a stimulus to the opponent's campaign to halt the project, especially if these assessments were brought on by surprise to some or many of the landowners.

In early 1972, the CCSO was formed and played an integral part in organizing the opposition to halt the project. The CCSO conducted public meetings, sought the support of various environmental groups, and formulated an effective letter-writing campaign to show local, state, and federal officials that local initiative and support for the project, primary prerequisites for a successful PL 566 project, were lacking.

The opposition campaign continued. On August 10, 1973, the Director of the ODNR, William Nye, contacted the PCCD to inform them that the State of Ohio had noticed deterioration of public support for the proposed work plan of the PCCD. Nye said the plan contained numerous aspects which had met with persistent and growing public opposition from local and statewide groups due to economic, social, and environmental concerns. The letter from Nye also stated that the CCSO had submitted a report to the ODNR in February, 1973, which made various allegations and statements about the operation of the PCCD. At that time the ODNR had asked that the PCCD respond to these allegations by August 3, 1973. Nye said that if the PCCD failed to respond by this date, then the ODNR must conclude that the PCCD cannot respond, and therefore, the ODNR must consider withdrawing its support for the project.

As of August 10, 1973, the ODNR had not received a response from the PCCD. State support for the project was subsequently withdrawn. Shortly thereafter, on September 6, 1973, the PCCD was informed that further PL 566 federal funding for the project was being terminated due to lack of local support and the withdrawal of state support. The project was then put on an "inactive" status by the Soil Conservation Service. At this time only one of the eleven proposed flood detention structures had been completed.

The Southern Ohio Improvement League (SOIL) was then formed to bring the proponents of the project together in an effort to regain state and federal support. Letters were written to agencies at all levels to ask for reinstatement of the project. The proponents explained that there was a great need for flood protection, recreation, and economic growth in the area.

The ODNR's response to these letters of support was:

> . . . One of the key elements involved in a PL 566 watershed project, such as Pine Creek, is the degree of local support it receives. In recent months we have received numerous letters from both Lawrence and Scioto Counties regarding Pine Creek, the majority of them in opposition to the project. This lack of local support as indicated through meetings, letters, and other means, has prompted the State of Ohio to withdraw its support for the project.[10]

The ODNR and SCS remained convinced in the next few years that the necessary support for the project simply did not exist, even though there was some obvious support remaining. During this period (early 1970's), the well-known government scandal at the federal level was taking place (the Watergate affair). This probably contributed to the increasing erosion of public confidence in governmental bodies at all levels.

It was also during this same time period (1972-1975) that the Attorney General of the State of Ohio conducted an investigation into the organization and conduct of business by the Pine Creek Conservancy District. This investigation was the result of numerous letters sent to the State Attorney General's office from citizens of Lawrence and Scioto Counties. The State Attorney General's office on September 15, 1975, submitted a letter to the Pine Creek Conservancy District in which the findings of this investigation were released.

To summarize its findings, the State Attorney General's Office said:

> . . . . In short, we are most concerned for your District's general disregard for the open functioning of a governmental body, which is a cornerstone of the democratic form of government.[11]

It is suggested from these findings that the PCCD was not adhering to the law as set forth by the Ohio Conservancy Act. This further suggests that the unwillingness of the people to accept the project and the PCCD might well have been justified. The operational procedures of the PCCD, coupled with the Watergate scandal at the federal level, caused suspicion and distrust to develop in the residents of the watershed.

On December 16, 1975, Director Robert Teater of the ODNR sent a letter to all Ohio Conservancy Districts to bring their attention to Amended Substitute Senate Bill 74, which had recently become effective. This bill is the Sunshine Law, specifying and requiring, among other things, open public meetings. Teater stated in his letter:

> . . . . My experience is that a well-informed public is an essential element of a successful public works program. Those Conservancy Districts which encourage public participation are normally successful in obtaining public support.[12]

Director Teater's letter was possibly sparked by the recent findings of the State Attorney General in regard to the PCCD.

From 1975 to 1977, the PCCD and SOIL continued to attempt to revive the project, drum up local support, and obtain reinstatement by State of Ohio and the U.S.D.A. Soil Conservation service. The ODNR holds that a clear indication of public support would now be required to merit any further consideration of a flood control program for Pine Creek.

Another obstacle to be removed before any further action could be taken on the project was preparation of an environmental impact statement. Once inactive status was declared, the Soil Conservation Service said that it would not invest the time and money to perform the assessment until it was sure the project was to become active again. The SCS further stated that due to various threats and locally intense emotions concerning the project, it would not send its personnel to an area of such potential physical harm. No environmental impact statement was prepared.

As of March, 1977, public meetings held by the PCCD had started up again, but attendance was low. According to Mrs. Beverly Childers, founder of SOIL and now a member of the PCCD, the project has been "dragged through the weeds" for so long that many people put it aside as forgotten or doomed. Mrs. Childers also said that the PCCD members began disputing among themselves on some of the issues to be resolved.

Presently, all townships in the area of the watershed except one have, through their trustees, declared their official opposition to the project. The project remains on inactive status. No further construction has taken place on the project since inactive status was declared in 1973.

Summary

The Soil Conservation Service in its preliminary investigation of the Pine Creek area showed that there existed a need for flood protection, water supply, and recreation. There was local support for the project, and the project was organized and authorized.

Those individuals opposing the project then formed an effective opposition in an attempt to halt the project for reasons previously stated.

The conflict resulted in state and federal withdrawal of support shortly after work had begun. Both sides believed so strongly in what they were fighting for that compromise was never considered. Alternatives to the proposed action or trade-offs between the proponents and opponents were not examined or even proposed.

It is suggested that the following probably contributed significantly to the Pine Creek conflict at the local level: 1) the public's general lack of knowledge about the project in the early stages of planning and implementation, 2) lack of public participation in the planning and implementation stages, 3) the right of government to acquire privately-owned property for a public project, 4) unwillingness (and/or inability) of many of the watershed residents to pay for the project, and 5) assessment of all watershed residents to pay for the project when only the bottomland residents will benefit.

The Pine Creek conflict suggests a situation in which the general public to be most affected by the flood control project is actually opposed to it. But the major opposition did not organize and become effective until three years after the project was authorized.

Research indicates that one of the primary reasons for this delay was that the public was uninformed about the project to begin with.

Some of the residents of the watershed were faced with government acquisition of their homes and property by means of the inherent government power of eminent domain. This power entitles the government (in this case, the Pine Creek Conservancy District) to acquire private lands in the public interest after justly compensating the landowner.

The Pine Creek residents resent and thoroughly oppose this type of government intervention into their personal lives. They regard their rights to private property ownership very highly.

The dominant political philosophy of the residents is conservative, Republican, and individualistic. Government interference is looked down upon, especially if it means encroaching upon one's personal property right -- a right that walks hand-in-hand with the inalienable rights of life and liberty.[13]

Recommendations

If there is to be a watershed project for Pine Creek in the future, then much if not all of the planning will have to be reformulated. This is where many improvements can be made.

As of September, 1973 (ironically, the same time that the Pine Creek Project was declared inactive), a new system for planning water and related land resources projects was adopted by the U.S. Water Resources Council. These new planning criteria are entitled "Principles and Standards for Planning Water and Related Land Resources Projects."[14]

This "multiple-objective planning approach" differs from past resource planning in a number of significant ways. It systematically relates all aspects of water and related land resource planning to economics, social, regional, and environmental considerations. Environmental concerns are for the first time placed on an equal basis with economic development. The planning procedure also requires a display of the effects of the plan on regional development and social well-being.[15]

Additionally, the public must be involved from the initial planning stages. Thus, issues and social values of importance to those most affected by the proposed project can be identified and specified early in the planning process through effective public input.

With public input through public meetings and hearings, a compromise may be reached, either to accept one of the proposed alternatives or a possible combination of two or more alternatives.

Hence, the following recommendations are made:

1. Allow a cooling-off period of from three to five years.
2. Then determine if the local support which is so essential to a successful PL 566 project is present. If not, terminate the project and any further planning.
3. If it is determined that there does exist the necessary local initiative and support, proceed with complete reformulation of plans using the multiple-objective planning approach.
4. Court dismissal of the present Pine Creek Conservancy District should take place immediately. If a new Conservancy District is formed due to a show of local support for the project, the new Conservancy District should include members from both sides of the controversy.
5. The new Pine Creek Conservancy District should be conducted in an open, public, and business-like manner and should strictly adhere to the law as set forth in the Ohio Conservancy Act.
6. Preparation of an environmental impact statement should precede any further planning. This environmental analysis should become an integral part of the planning process.
7. The public must participate in all phases of planning and be kept informed by:
    a. Public hearings and meetings.
    b. Sending information to all residents of the watershed and surrounding areas early in the planning stages concerning:
        1. Significance and purpose of a PL 566 project.
        2. The role and authority of the Pine Creek Conservancy District.
        3. What part the public can and should play in planning the project.
        4. What part of the cost the residents will be required to pay (as a whole and individually).
        5. Exactly which homes and property will be taken for the dams and lakes.

6. A thorough explanation of the protection that the relocated residents will receive under the "Relocation Assistance and Real Property Acquisition Policies Act of 1970."

8. Include alternatives in the plan to:
   - a. Take fewer homes and less private property.
   - b. Provide for a smaller project or a series of smaller projects that would cost less and take less private property.
   - c. Locate dams, reservoirs, and lakes in different places.
   - d. Include channel improvement only.
   - e. Implement flood-plain zoning in areas most subject to flooding as opposed to a series of dams and lakes.
   - f. Take no action whatsoever.

In summary, it is suggested that the planners consider as an integral part of the planning process the values of the people who are to be affected by the project. Collection of an accurate array of facts should be carried out in relation to (and not to the exclusion of) the values of the residents who will pay for the project and be most affected by it.

Compromise and serious consideration of a variety of alternatives to meet the project objectives can lead to a project decision which is generally acceptable to the public and meets the project objectives in a workable manner.

FOOTNOTES

1. Interview with Arthur Woldorf. Ohio Department of Natural Resources Division of Water, Water Planning Unit. Columbus, OH, August 9, 1977.

2. Ohio Department of Natural Resources Division of Water, Water Planning Unit. File on Public Law 566, Pine Creek.

3. Ohio Department of Natural Resources Division of Water, Water Planning Unit. Watershed Planning Files.

4. Ohio Department of Natural Resources Division of Water, Water Planning Unit. Preliminary Investigatory Report on the Pine Creek Watershed Project. Prepared by SCS, 1965.

5. Ibid.

6. U.S. Department of Agriculture Soil Conservation Service Fact Sheet on the Pine Creek Watershed Project, May, 1971.

7. Ohio Department of Natural Resources Division of Water, Water Planning Unit. *Preliminary Investigatory Report on the Pine Creek Watershed Project*. Prepared by SCS, 1965.

8. Ohio Department of Natural Resources Division of Water, Water Planning Unit. *Pine Creek Work Plan*, 1968, updated 1974.

9. Interview with Beverly Childers, past President of Southern Ohio Improvement League. Pedro, OH, August 1, 1977.

10. Ohio Department of Natural Resources Division of Water, Water Planning Unit. File on Public Law 566 Projects, Pine Creek.

11. *Ibid*.

12. *Ibid*.

13. Johnson, Glenn L. and Lewis K. Zerby. *What Economists Do About Values*. East Lansing, MI 72-101, 1973.

14. Fairchild, Warren D., Director, U.S. Water Resources Council. "Principles and Standards: The President's Announcement." *Water Spectrum*, 5(4): 22-27, 1973.

15. *Ibid*.

Section 11:

Public Participation Policy

PUBLIC PARTICIPATION POLICY *

The U.S. Environmental Protection Agency, like other governmental agencies, has numerous legislated requirements to encourage and involve the public in its decision-making process. To assure that its regulations on public participation are comprehensive and explicit, the requirements were refined. The following policy statement reflects EPA's recognition that the Agency needs to work much more closely with members of the public whose lives, environment, and business may be affected by Agency actions.

The policy emphasizes participation by the public in decisions where options are available and alternatives must be weighed. It also emphasizes the importance of providing the public with early and comprehensive background information, of having dialogue between agency officials and the public, and of demonstrating responsiveness to public concerns and preferences when final decisions are made.

Public participation coordinators and those who represent the public will find this an example of a well-structured policy. It incorporates the comments and concerns of individuals and groups who responded to a draft policy and those who attended public meetings. It appears to meet both the requirement of a federal agency and the publics that it serves.

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Monday
January 19, 1981

Part XXXII

Environmental Protection Agency

Responsiveness Summary and Preamble on Public Participation Policy

[illegible] POLICY

ENVIRONMENTAL PROTECTION AGENCY

[A8-FRL-1686-8]

Responsiveness Summary and Preamble on Public Participation Policy

AGENCY: Environmental Protection Agency.

ACTION: Policy.

SUMMARY: This Policy is designed to provide guidance and direction to public officials who manage and conduct EPA programs on reasonable and effective means of involving the public in program decisions. The Policy applies to programs under the Clean Air Act (Pub. L. 95-95), Quiet Communities Act (Pub. L. 95-609), Resource Conservation and Recovery Act (Pub. L. 94-580), Toxic Substances Control Act (Pub. L. 94-469), Federal Insecticide, Fungicide and Rodenticide Act (Pub. L. 95-396), Safe Drinking Water Act (Pub. L. 95-190), and the Clean Water Act (Pub. L. 95-217).

The Policy establishes the objectives of public participation in EPA programs, outlines essential elements that must be incorporated in any public participation effort, discusses a number of public participation mechanisms with ground rules for their effective use, and assigns responsibility for planning, managing, funding, and carrying out public participation activities to EPA managers. The intent of the Policy is to ensure that managers plan in advance needed public involvement in their programs, that they consult with the public on issues where public comment can be truly helpful, that they use methods of consultation that will be effective both for program purposes and for the members of the public who take part, and finally that they are able to apply what they have learned from the public in their final program decisions.

The Policy provides a uniform set of guidelines and requirements applicable to all EPA programs, thus assuring a consistent base level of effort. The Policy applies to all EPA activities as well as to State and local activities funded or delegated by EPA. EPA will develop work plans as part of the annual budget development cycle, and amend program regulations as needed to incorporate the Policy. Affected programs are listed in the Appendix to the Policy.

DATES: The Policy is effective on January 19, 1981.

FOR FURTHER INFORMATION CONTACT: Sharon F. Francis, Special Assistant for Public Participation, Office of the Administrator (A-100), Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, telephone 202/245-3068.

SUPPLEMENTARY INFORMATION: The Policy which takes effect with this publication is the result of long and careful consideration on the part of EPA, State and local agencies, and the diverse public that is actively concerned with EPA programs. EPA already enjoys a substantial amount of involvement from an active and interested public. Indeed, to that public goes substantial credit for progress made in cleaning up environmental pollution over the last ten years. There has been recognition, however, both inside and outside the Agency, that new steps need to be taken to ensure that members of the public affected by EPA programs are given an earlier and better opportunity to be heard in EPA decisionmaking.

EPA has received a significant volume of thoughtful criticism of its performance in implementing its legally mandated public participation activities and its more general responsibility to involve the public in governmental decisions. The desire of the public to have a stronger role in shaping government programs which affect their lives, businesses, and communities, and also the growing need for governmental units at all levels to participate in the programs of other governmental entities has stimulated this criticism. Government decision-makers have become increasingly aware of the capability of the public to make constructive use of opportunities for involvement. This new awareness has been accompanied by increased practical experience in using a variety of techniques to facilitate public involvement.

For these reasons, EPA has recognized the need to improve public involvement in governmental decisions by clarifying the rights and responsibilities of potential participants and those responsible for administering public participation programs. This will lead to better decisions, more satisfactory opportunities for the public to pursue their goals through government, and greater public confidence in government because decisions will be made with participation by interested and affected members of the public.

Both EPA and members of the public have more demands on their scarce time and resources than can be filled, and need to use them where the results can be most effective. This Policy's common objectives, procedures, and emphasis on results will benefit the entire Agency, and will give the public new confirmation that EPA intends to be as responsive as possible to public questions, concerns, and preferences.

This Policy is the result of analysis and reforms instituted at the Administrator's direction by the Agency Task Force on Public Participation. The Policy was initially proposed in the Federal Register on April 30, 1980. In order to ensure that the proposed Policy received attention from the various sectors of the public active in EPA's programs, the Agency mailed copies of the proposal to a nationwide mailing list that included business and industry, labor organizations, professional and trade associations, news media, consumer and women's organizations, environmental and public interest groups, Black, Hispanic, and Native American organizations, scientific, public health, legal and planning societies, and State agencies.

Additionally, each of EPA's ten regional offices received copies of the Policy for distribution to their constituent lists at the regional, State and local levels. A number of regional offices wrote and distributed summaries of the proposed Policy, as well as held meetings to give members of the public opportunity to raise questions and express their views. Public meetings were held in Boston, Chicago, Columbus, Minneapolis, Denver, Seattle, Portland, Boise, Anchorage, and Washington. As a result of these outreach efforts, close to 500 members of the public took part in discussions and offered comment on the proposal.

The following analysis of the comments received, in terms of the affiliation of the person commenting, provides insight on the expectations and needs of various sectors of the public.

Written comments were received from people in forty-two States, with the largest number of comments coming from States where EPA's regional offices had also stimulated public meetings, namely Massachusetts, Connecticut, Minnesota, Ohio and Washington. Written comments were in almost every case substantive and extensive, often running many pages in length. In almost all cases, the people who wrote had been involved with EPA programs either as public participants or program managers, and their comments reflected this reservoir of practical experience.

The largest section of the public who commented were public interest groups, including environmental, consumer, and local civic groups. They provided 30% of the comments received and were closely followed by economic interests, including industries, business, and trade associations with 27%. Additionally, 15% of comment came from State agencies, 10% from citizens-at-large, 10% from local officials, 6% from other federal agencies, and 2% from academic insititutions.

Over 420 issues were addressed, and of these, the ones that drew the greatest amount of discussion were the following: the composition of advisory groups; whether to provide financial assistance to the participating public, and under what criteria; whether to apply the Policy to State agencies carrying out EPA programs; and the content and use of Responsiveness Summaries.

Eighty-five percent of those who commented supported a final Policy as strong or stronger than the one the Agency proposed in late April, and this support came from all sectors of the public. In the case of State agencies, for example, only 7 of the 44 who commented were negative about EPA's emphasis on public participation or wanted to see it weakened. The other 37 agencies all wanted a Policy and wanted it even stronger than EPA proposed. Economic interests expressed opinions on both sides of the issue, but 20% wanted it stronger and 50% supported the Policy as proposed.

Those who opposed the proposed Policy said that EPA should not be in the business of stimulating participation. People who are really concerned, they said, will come forth and participate on their own. This assumes, however, that people on their own will know that environmental decisions are about to be made, that these decisions affect them, and that they will have enough background information to be able to contribute to what is usually a technical and complex discussion.

The Agency agrees that public participation must not be a contrived exercise, nor should it be undertaken with the purpose of manipulating the public into agreement with a governmental position. EPA recognized its responsibility to give affected sectors of the public a fair opportunity to know of forthcoming governmental decisions and to be heard when those decisions are made. Clear requirements will make public involvement more cost-effective, both for EPA management and for the various sectors of the public.

It is clear from widespread support for an effective Policy that EPA's emphasis on public participation struck a responsive chord in all sectors of the public. The public's thoughtfully reasoned statements for amplifying or strengthening aspects of the proposed Policy have convinced us of the merit of a number of changes. EPA recognizes the commitment it is now making to more open and effective consultation with the public. This Policy will provide a strong and practical framework to guide our interactions in the months and years ahead.

Summary of Response to Public Comment

The following sections respond to major points raised in comments made by the public.

1. *Objectives of EPA's Policy:* There was support from all sectors for the objectives stated in the proposed Policy, but a number of people called for additions as well. These include the role of the public in identifying and selecting among alternatives, the importance of early and continuing involvement, the significant opportunity that public participation affords for anticipating and reducing conflicts, and the need to create equal access to the regulatory process. Commentors also pointed out that objectives need to be comprehensive since they provide the yardstick for evaluation. All of these suggestions have merit, and EPA has added them to the final Policy.

2. *Application of the Policy to EPA Programs Under State Administration:* Most of the laws administered by EPA designate certain programs which can be administered by a State, instead of by EPA, if the State program meets statutory and regulatory criteria. The proposed Policy required EPA to provide for public participation in the process of deciding to approve such State programs. It also provided that, after approval, the State would assume responsibility for meeting the public participation requirements.

In the preamble to the proposed Policy, EPA drew attention to this matter, and specifically asked for comment on whether the Agency should apply the Policy to EPA programs when conducted by States. A major proportion of commenters from all categories preferred the option as proposed, on the grounds that participation is needed and beneficial to program decisions regardless of who administers the program. A much smaller number of commenters favored permitting States to achieve "substantially equivalent results" to EPA's Policy; however, none responded to EPA's request for "specific suggestions for wording and evaluation criteria" since "substantially equivalent provisions have a history of being easy to espouse but difficult to demonstrate." After reading all the comments, EPA concludes that the Policy, as proposed, has sufficient flexibility within a context of practical requirements that it will be beneficial to State program administration.

Two years ago, when EPA proposed its regulation for public participation in Clean Water, Drinking Water and Solid Waste programs (40 CFR Part 25), the question of applying the requirements to States was intensely controversial. Now, with more than a year of experience in those programs, the worst apprehensions have not materialized and public participation has begun to prove its constructive role. Most State agencies, therefore, were not troubled by the proposal. In view of the comments received and the discussion above, EPA finds no need to alter this aspect of the Policy.

3. *Consistency with Part 25 Regulations for Public Participation in Water and Waste Management Programs:* In proposing the Policy, EPA made a conscious effort to ensure compatibility between its provisions and those of the earlier Part 25 regulation for programs under the Clean Water Act, Safe Drinking Water Act, and Resource Conservation and Recovery Act. Two additions that EPA is now making to the Policy will further remove the differences between the two documents and bring the Policy into closer alignment with Part 25. One change is the requirement that EPA review and require further efforts as needed to acheive the balanced membership requirement for advisory groups. The other change is that EPA may require corrective action on the part of State program grantees to ensure compliance with the Policy. While differences in wording remain between the two documents, EPA holds that 40 CFR Part 25 fulfills the intent and requirements of the Policy in the procedural areas (Section D. of Policy) of common subject matter. If differences remain between Part 25 and the Policy, Part 25 will control. The sections of the Policy on work plans, assistance to the public, and authority and responsibility augment the requirements contained in 40 CFR Part 25, and apply to all programs of the Agency.

4. *How to Identify the Public Who Should Participate:* Many of those who commented on the Identification section of the Policy liked our emphasis on developing a contact list of interested or affected members of the public at the outset of a participation opportunity. Several pointed out, however, that contact lists need frequent updating, especially on lengthy projects. This change we are incorporating. A number of those who commented on this section requested that the Policy indicate the uses of a contact list, and we have revised the Policy to do so.

5. *Ways to Inform and Reach the Public:* The majority of comments asked for amplification of the Outreach

section. Commenters sent many valuable suggestions, many of which the final Policy incorporates. Some general areas of concern with which we agree, and have responded to in the final Policy, include the following: (1) public access to information is critical to successful public participation programs; (2) information must be translated from "technical" language into language understandable to the lay public; (3) outreach activities should be emphasized as ongoing activities so the public can be kept up to date on matters of concern; and (4) the uninterested but impacted publics' views need to be solicited in some manner.

Specific comments addressed each of the major sections of Outreach. Under *Methods*, commenters suggested further use of a variety of techniques, many of which we have added to the final version. Under *Content*, it was suggested that materials be prepared in clear, concise language to inform the public of triggering events which initiate a proposed action, and provide details on supporting research analysis and methodology. These suggestions, along with the availability of Environmental Impact Statements, were included in the final Policy. Under *Notification*, the major concerns were that notices should inform the public about the initiation of a decision-making process and that we should describe the type of media notice required. In the *Depositories* section, commenters suggested public and university libraries as appropriate locations, and that consideration ought to be given to accessibility, travel time, parking, and availability during off-work hours. We agreed with these suggestions and included them in the final Policy.

6. *Public Notification of Financial Assistance Awards:* We received complaints from the public that often they never hear about EPA funded projects that provide participation opportunities in programs of State, substate, and local governments. They suggested that we incorporate some type of requirement that notice be given either at the time EPA receives applications, or after award acceptance. After careful consideration, and with a conscious effort to keep the Policy consistent with 40 CFR Part 25 regulations, we have added a section under *Timing* that the recipient give public notice within 45 days of award acceptance.

7. *Methods to Improve Communication Between EPA and the Public:* Many commenters were dissatisfied with the *Dialogue and Hearing* section. They felt we placed too much emphasis on describing hearing requirements, and did not give enough attention to other methods of ensuring communication between EPA and the public. We responded to these concerns by amplifying the *Dialogue* section to include these suggestions and listing other methods of soliciting and using public input. These methods include review groups, workshops, conferences, personal correspondence and conversations, meetings, and citizen panels.

8. *Suggestions for Improvement of Hearing Format:* All sectors of the public responding felt that hearing procedures needed to move away from rigid rituals and be more attuned to listening and responding to the public's views. We agree that public hearings can be more successful if they are conducted in a non-intimidating manner, and if the public has been informed of the issues and has access to pertinent information prior to the hearing. Those who commented on the *Content of Notice* section stressed the importance of early and clear discussion of the issues and alternatives the public is asked to comment upon. Under *Conduct of Hearing*, many commenters asked for more informality and opportunity for questions and answers in the hearing. People also commented that hearings are often located too far from the affected area. We have revised the Policy to incorporate these ideas.

9. *45-Day Notice Prior to Hearings:* Although some commenters felt that a 45-day notice prior to the date of a hearing was a needless delay of time and would slow down the process, others felt that 45 days was much too short a time to expect individuals or groups to prepare adequately for hearings, and some said that a 60 or 90-day notice would be more appropriate for proper preparation. Approximately 30% of the respondents favored a 30-day or less notice period, with the remaining 70% favoring a 45-day or longer period. However, the bulk of the comments favored keeping the hearing notice requirement at 45 days. The major reasons for the 45-day notice period include: (1) there is little control over mail deliveries, and often the interested public receives information too late to prepare effectively for hearings; (2) many groups meet once a month and need time to meet and discuss the notice to decide on a course of action; (3) travel time over long distances is often involved to acquire and review material; and (4) the review material is often complex and requires time for research.

Additionally, we received comments concerning the discretion given to Assistant Administrators and Regional Administrators to waive the 45-day requirement to 30 days or less in emergency situations, or if the issues are not complex or controversial. Some commenters objected to the waiver saying it gives the Assistant Administrators and Regional Administrators too much discretionary power, and feared they may use the waiver more often than necessary. We feel some flexibility must be maintained here, and that the Assistant Administrators and Regional Administrators would be able to make exceptions they feel are warranted. However, we have stated that those objecting to a waiver may appeal to the Administrator of EPA.

10. *Composition of Advisory Groups:* One of the subjects most widely discussed in the proposed Policy has been the composition of advisory groups. Almost all who commented on this subject believed EPA was fair and used good judgment to prescribe a balance of backgrounds among advisory group members; however, a great many commenters believed certain categories sympathetic to their own viewpoints should be given added weight, or others of contrasting views should be prohibited.

Overall, commenters favored EPA's proposed balance of categories two-to-one, and we intend to retain this provision, with two important additions: tribal officials have been added as another category of public officials, and we have made clear that elected public officials should not be from the decision-making body the group is advising. Several people wanted "citizens with economic interests" and "organizations with economic interests" as two separate categories, but we do not agree with this proposal. We prefer to leave the citizen-at-large category unencumbered so appointing officials can have room to select a variety of individuals with potentially worthwhile contributions.

11. *Proof of Effort to Achieve Advisory Group Composition:* A number of those who commented were concerned that the balanced membership of advisory groups could be manipulated if there is not some degree of oversight by EPA. They also pointed out that the 40 CFR Part 25 regulation has a section calling for demonstration of "proof of effort," and this section has given valuable oversight to agencies with advisory groups. We agree that federal guidance may be valuable in this area and consequently have added a section that requires advice, assistance, review, and approval by EPA.

12. *Use of Advisory Group Recommendations:* A number of people

experienced with advisory groups reported their frustration with instances when the group felt their recommendations were being suppressed by the agencies they advised. Since a major purpose of this Policy is to improve openness on the part of governmental entities, we have added a short section to the Policy which makes it clear that advisory group recommendations should be publicly available.

13. *The Frequency and Use of Responsiveness Summaries:* The great majority of those who commented on the subject of Responsiveness Summaries supported EPA's requirement, and thought these summaries would provide an important addition to decision-making. A few people pointed out, however, that our emphasis should not be on documenting public views as much as it should be on using them. We agree with these comments and have added some language to reflect this emphasis. Additionally, there was a certain amount of misunderstanding that Responsiveness Summaries would be required after every hearing or meeting. This is not our intent, but rather it is that Responsiveness Summaries be prepared at "key decision points." These will be identified in public participation work plans, as well as in program regulations where they are being revised to incorporate provisions of this Policy.

14. *How Much Feedback Should Be Provided to the Public on the Results of its Participation?:* EPA's proposal that feedback be provided received strong support from all sectors of the public. A number of commenters wanted to see feedback provided within a time limit, such as 60 days, though others recognized the burden that such acknowledgements would place on the Agency's staff. Throughout the comments on this section was the desire on the part of participants to know substantively why their suggestions were or were not accepted. EPA does not have the staff resources to be able to commit itself to interim replies of a substantive nature, especially when the number of comments on many issues run into the thousands. We do, however, recognize a serious commitment to providing feedback and thus are revising the policy to state that all "participants in a particular activity (must) receive feedback," not just "have access" to it as stated in our earlier proposal.

15. *The Use of Work Plans:* In EPA's initial proposal, public participation work plans were contemplated for two reasons: first, good public participation needs to be carefully planned, and second, the resource outlays needed for public participation should be built into program operating budgets. Many members of the public, as well as State and substate officials who commented on the Policy, supported EPA's emphasis upon work plans. In fact, several said work plans should be discussed earlier in the Policy, a suggestion we have taken. Additionally, we have added some clarifying and strengthening language on the content of work plans and the timing of their preparation. Work plans will be developed at both the program and project levels, and EPA will provide guidance on the content of these documents.

16. *The Use of Public Funds to Assist the Participating Public:* To a large extent the debate over financial assistance to members of the public or public organizations focussed on the use of such funds in regulatory or adjudicatory proceedings. The debate was rendered moot by Congress in its action on EPA's 1981 appropriation which prohibited use of EPA funds for that purpose. The final Policy reflects the removal of this controversial aspect. Other types of public participation funding (e.g. travel expenses for witnesses at public hearings on hazardous waste disposal siting) proved uncontroversial and occasioned little comment. It is the Agency's intention to continue to fund such non-regulatory, non-adjudicatory participation.

17. *The Responsibility of EPA Officials for Implementing the Policy:* Many people who commented on the Policy liked the Agency's proposal which outlined the authority and responsibility of various Agency officials for ensuring the Policy's implementation. Several pointed out, however, that the language was confusing and duplicative. Therefore, we have rewritten that section with separate duties identified for Regional Administrators, Assistant Administrators, the Director of the Office of Public Awareness, and the Administrator. These sections should clarify the previous ambiguities.

18. *Ensuring Compliance with the Policy:* A large proportion of commenters wanted reassurance that this Policy is more than a collection of good intentions, and that EPA will stand behind its provisions and enforce them. They were particularly concerned with State and substate assistance recipients, and urged EPA to develop enforcement sanctions. While we hope that sanctions will not be necessary, we have amended the Policy with a section on sanctions that gives greater emphasis to Policy enforcement.

19. *Relationship Between Public Participation Policy and Environmental Impact Statement (EIS) Process:* Several people noted that the proposed Policy was silent on how the Policy fits with the Agency's EIS procedures. EIS's are undertaken primarily for grants for wastewater treatment plans, new source National Pollutant Discharge Elimination System (NPDES) permits, and certain major regulations. Many of the goals of this public participation Policy and EPA's EIS programs are similar. The requirements of the new Policy will serve to reinforce, and in some cases, supplement existing EIS procedures. In revising the Policy, we have added a number of references to EIS's to emphasize this relationship.

20. *Overall Evaluation of Effectiveness:* Several commenters from Federal or State government agencies, as well as several citizens with years of experience as active participants, drew attention to the importance of evaluating the Policy. They said this should be done both to oversee how well its provisions are being followed and to identify, where possible, the results of improved public involvement on Agency decisions and program implementation.

EPA is committed to evaluating this Policy within three years from the date of publication. This will be done under the direction of the Administrator's Special Assistant for Public Participation. This evaluation will include such matters as effectiveness of requirements, enforceability, resource expenditures, alternative public participation methods, public reaction, and reporting requirements.

Conclusion

EPA has made a number of additions and improvements to the proposed Policy on the basis of what it learned from the public during the comment period. Indeed, the revised Policy itself is a good example of how public involvement augments the Agency's work. The overwhelming proportion of statements came from people with long experience in public policy. All reflected a similar outlook: they, like EPA, want to make the system work better. Among many interesting statements, a few examples indicate the challenge of the public's expectations:

A planning board chairman from a small New England town spoke of the resentment that the public has come to feel toward the work of bureaucrats. From his experience in marshalling talent to address local problems, he suggested that EPA consider recruiting broad based citizen task forces or advisory groups to develop all the Agency's regulations and other major policy items. They should be given a deadline, and only if they failed to produce, should EPA step in and do the work. "That would be real participation," he said.

A major national chemical manufacturer opened its statement by saying the Policy is not needed, since the company believes it duplicates existing procedures. The company continued, however, to urge substantial reform of EPA practices in order to give the public a much earlier opportunity for participation before the bureaucratic momentum becomes too great to accept any changes. They also advocated genuine responsiveness to the public, not just a "superficial consideration of comments."

A citizen group that has been working for years to reduce adverse environmental consequences from two oil refineries cited a series of disappointing interactions with EPA: delays in obtaining requested materials for review prior to hearings; difficulties in seeing pertinent materials even when they visited State offices; the high costs of reproducing documents; and a feeling that government agencies were giving substantial amounts of time and assistance to industrial applicants, but were not even willing to answer the questions of opponents, let alone assist them more substantially. The group also had the impression that EPA had its mind made up at the time of a public hearing, and the citizens felt their own efforts were wasted.

Statements such as these reveal the frustration that many members of the public have experienced when trying to work with the Agency, and they also point to the motivation and high hopes that the public continues to hold about participating in environmental protection issues. Public participation lies at the heart of the Agency's credibility with the public. It affords the best tested recipe for citizens to influence the governmental decisions that affect their lives and pocketbooks. This Policy takes an important step in defining when EPA will undertake public participation, and in saying that when we do it, we intend to do it right.

Members of the public who wish to obtain the background Compilation of Issues with their disposition and List of Commenters on this Policy may do so by contacting: Sharon F. Francis, Special Assistant for Public Participation, Office of the Administrator (A-100), Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460, telephone 202/245-3066.

Dated: January 13, 1981.

Douglas M. Costle,
Administrator.

Final E.P.A. Policy on Public Participation

This Policy addresses participation by the public in decision-making, rulemaking, and program implementation by the Environmental Protection Agency (EPA), and other governmental entities carrying out EPA programs. The term, "the public" as it is used here, means the people as a whole, the general population. There are a number of identifiable "segments of the public" who may have a particular interest or who may be affected one way or another by a given program or decision. In addition to private citizens, "the public" includes, among others, representatives of consumer, environmental, and minority groups; the business and industrial communities; trade, industrial, agricultural, and labor organizations; public health, scientific, and professional societies; civic associations; universities, educational, and governmental associations; and public officials, both elected and appointed.

"Public participation" is that part of the agency's decision-making process that provides opportunity and encouragement for the public to express their views to the agency, and assures that the agency will give due consideration to public concerns, values, and preferences when decisions are made.

A. Scope

The requirements and procedures contained in this Policy apply to the Environmental Protection Agency and other governmental entities carrying out EPA programs (referred to herein as "agency"). The activities covered by this Policy are:

EPA rulemaking, when regulations are classified as significant, (under terms of Executive Order 12044);

The administration of permit programs as delineated in applicable permit program regulations;

Program activites supported by EPA financial assistance (grants and cooperative agreements) to State and substate governments;

—The process leading to a determination of approval of State administration of a program in lieu of Federal administration;

—Major policy decisions, as determined by the Administrator, appropriate Assistant Administrator, Regional Administrator, or Deputy Assistant Administrator, in view of EPA's responsibility to involve the public in important decisions.

When covered activities are governed by EPA regulations or program guidance, the provisions of the Policy shall be included at appropriate points in these documents. Before those changes are made, the provisions of the existing regulations or program guidance shall govern.

B. Purpose

The purpose of this Policy is to strengthen EPA's commitment to public participation and establish uniform procedures for participation by the public in EPA's decision-making process. A strong policy and consistent procedures will make it easier for the public to become involved and affect the outcome of the agency's decisions.

This in turn will assist EPA in carrying out its mission, by giving a better understanding of the public's viewpoints, concerns, and preferences. It should also make the agency's decisions more acceptable to those who are most concerned and affected by them.

Agency officials will provide for, encourage, and assist participation by the public. Officials should strive to communicate with and listen to all sectors of the public. Where appropriate, this will require them to give extra encouragement and assistance to some sectors, such as minorities, that may have fewer opportunities or resources.

The Policy identifies those actions which are required and others that are discretionary, on the part of agency managers. The Policy assumes, however, that agency employees will strive to do more than the minimum required, and is not intended to create barriers to more substantial or more significant participation. The Policy recognizes the agency's need to set priorities for its use of resources, and emphasizes participation by the public in decisions where options are available and alternatives must be weighed, or where substantial agreement is needed from the public if a program is to be carried out.

Public participation must begin early in the decision-making process and continue throughout the process as necessary. The agency must set forth options and alternatives beforehand, and seek the public's opinion on them. Merely conferring with the public after a decision is made does not achieve this purpose.

Agency officials must avoid advocacy and precommitment to any particular alternative prior to decision-making. The role of agency officials is to plan and conduct public participation activities that provide equal opportunity for all individuals and groups to be heard. Officials should actively seek to facilitate resolution of issues among disagreeing interests whenever possible.

Decision-makers are aware that issues which are not resolved to the satisfaction of the concerned public may ultimately face time-consuming review. If the objectives of EPA's public participation program are achieved, delays to accommodate litigation should be reduced.

C. Objectives

In establishing a policy on public participation, EPA has the following objectives:

—To use all feasible means to create early and continuing opportunity for public participation in agency decisions;

—To promote the public's involvement in implementing environmental protection laws;

—To make sure that the public understands official programs and the implications of potential alternative courses of action;

—To solicit assistance from the public in identifying alternatives to be studied, and in selecting among alternatives considered;

—To keep the public informed about significant issues and changes in proposed programs or projects, as they arise;

—To create an equal and open access for the interested and affected parties to the regulatory process;

—To make sure that the government understands public goals and concerns, and is responsive to them;

—To demonstrate that the agency consults with interested or affected segments of the public and takes public viewpoints into consideration when decisions are made;

—To anticipate conflicts and encourage early discussions of differences among affected parties;

—To foster a spirit of mutual trust, confidence, and openness between public agencies and the public.

D. General Procedures for All Programs

Each Assistant Administrator, Office Director, or Regional Administrator shall determine forthcoming decisions or activities to which this Policy should be applied, and take the steps needed to assure that adequate public participation measures are developed and implemented.

To ensure effective public participation in any decision or activity, the agency must carry out five basic functions: Identification, Outreach, Dialogue, Assimilation, and Feedback.

1. *Identification.* It is necessary to identify groups or members of the public who may be interested in, or affected by, a forthcoming action. This may be done by a variety of means: developing a contact list of persons and organizations who may have expressed an interest in, or may by the nature of their purposes or activities be affected by or have an interest in a forthcoming activity; requesting from others in the agency or from key public groups, the names of interested and affected inidividuals to include; using questionnaires or surveys to find out levels of awareness; or by other means. If EPA is required to file an Environmental Impact Statement (EIS), the scoping process can be used to identify interested parties.

The responsible official(s) shall develop a contact list for each program or project, and add to the list whenever members of the public request it. The list should be up-dated frequently, and it will be most useful if subdivided by category of interest or geographic area.

The contact list shall be used to send announcements of participation opportunities, notices of meetings, hearings, field trips and other events, notices of available reports and documents, and for identifying members of the public who may be considered for advisory group membership and other activities.

2. *Outreach.* The public can contribute effectively to agency programs only if it is provided with accurate, understandable, pertinent and timely information on issues and decisions. The agency shall make sure that adequate, timely information concerning a forthcoming action or decision reaches the public. The agency shall provide policy, program, and technical information at the earliest practical times, and at places easily accessible to interested and affected persons and organizations, so they can make informed and constructive contributions to decision-making. Information and educational programs shall be developed so that all levels of government and the public have an opportunity to become familiar with the issues and the technical data from which they emerge. Informational materials shall highlight significant issues that will be the subject of decision-making. Special efforts shall be made to summarize complex technical materials for the public.

a. *Methods.* The objective of the agency's public outreach program is to insure that the public understands the significance of the technical data so that rational public choices can be made. Outreach programs require the use of appropriate communication tools, and should be tailored to start at the public's level of familiarity with the subject.

The following, among other approaches, may be used for this purpose:

(1) publications, fact sheets, technical summaries, bibliographies;

(2) questionnaires, surveys, interviews;

(3) public service announcements, and news releases;

(4) educational activities carried out by public organizations.

b. *Content.* Outreach materials must include background information (e.g. statutory basis, rationale, or the triggering event of the action); a timetable of proposed actions; summaries of lengthy documents or technical material where relevant; a delineation of issues; alternative courses of action or tentative determinations which the agency may have made; whether an EIS is, or will be, available; specific encouragement to stimulate active participation by the public; and the name of an individual to contact for further information.

Whenever possible, the social, economic, and environmental consequences of proposed decisions and alternatives should be clearly stated in outreach material. Technical evidence and research methodoogy should be explained. Summaries of technical documents should be footnoted to refer to the original data. Fact sheets, news releases, summaries, and similar publications may be used to provide notice of availability of materials and to facilitate public understanding of more complex documents, but should not be a substitute for public access to the complete documents.

c. *Notification.* The agency must notify all parties on the contact list and the media of opportunities to participate and provide appropriate information, as described in the first paragraph of Section 2.b. above. Printed legal notices are often required by program regulations, but do not substitute for the broader notice of the media and contact list required by this section.

d. *Timing.* Notification (above) must take place well enough in advance of the agency's action to permit the public to respond. Generally, it should take place not less than 30 days before the proposed action, or 45 days in the case of public hearings (exceptions in the case of public hearings are discussed under Dialogue, below).

Where complex issues or lengthy documents are presented for public comment, the comment period should allow enough time for interested parties to conduct their review. This period generally should be no less than 60 days. Where participation opportunities are to be provided in programs of State, substate, and local governments supported by EPA financial assistance, notice shall be given by the recipient to the public within 45 days after award acceptance.

e. *Fees for Copying.* Whenever possible, the agency should provide copies of relevant documents, free of charge. Free copies may be reserved for private citizens and public interest organizations with limited funds. Any charges must be consistent with requirements under the Freedom of Information Act as set forth in 40 CFR Part 2.

f. *Depositories.* The agency shall provide one or more central collections of documents, reports, studies, plans, etc. relating to controversial issues or significant decisions in a location or locations convenient to the public. Depository arrangements should be made when possible with public libraries and university libraries. Consideration must be given to accessibility, travel time, parking, transit, and to availability during off-work hours. Copying facilities, at reasonable charges, should be available at depositories.

3. *Dialogue.* There must be dialogue between officials responsible for the forthcoming action or decision and the interested and affected members of the public. This involves exchange of views and open exploration of issues, alternatives, and consequences.

Public consultation must be preceded by timely distribution of information and must occur sufficiently in advance of decision-making to make sure that the public's options are not foreclosed, and to permit response to public views prior to agency action. Opportunities for dialogue shall be provided at times and places which, to the maximum extent feasible, facilitate attendance or participation by the public. Whenever possible, public meetings should be held during non-work hours, such as evenings or weekends, and at locations accessible to public transportation.

Dialogue may take a variety of forms, depending upon the issues to be addressed and the public whose involvement is sought. Public hearings are the most familiar forum for dialogue and often are legally required, but their use should not serve as the only forum for citizen input. When used, hearings should be at the end of a process that has given the public earlier opportunity for becoming informed and involved. Often other techniques may serve a broader purpose:

- *Review groups* or *ad hoc committees* may confer on the development of a policy or written materials;
- *Workshops* may be used to discuss the consequences of various alternatives, or to negotiate differences among diverse parties;
- *Conferences* provide an important way to develop concensus for changing a program or the momentum to undertake new directions;
- *Task forces* can give concentrated and experienced attention to an issue;
- *Personal conversations* and *personal correspondence* give the individualized attention that some issues require;
- *Meetings* offer a good opportunity for diverse individuals and groups to express their questions or preferences;
- A *series of meetings* may be the best way to address a long and complex agenda of topics;
- *Toll-free lines* can aid dialogue, especially when many questions can be anticipated or time is short;
- A *hearing panel* composed of persons from representative public groups may be used in non-adjudicatory hearings to listen to presentations and review the hearing summary.

This list is not exhaustive, but it indicates the importance for program managers in being flexible and choosing the right techniques for the right occasions.

a. *Requirements for public hearings.* (1) Timing of Notice. Notices must be well publicized and mailed to all interested and affected parties on the contact list (see 1. above) and to the media at least 45 days prior to the date of the hearing. However, when the Assistant Administrator or Regional Administrator find that no review of substantial documents is necessary for effective participation and there are no complex or controversial matters to be addressed, the notice requirement may be reduced to no less than 30 days in advance of the hearing. Additionally, in permit programs, notice requirements will be governed by permit regulations and will be no less than 30 days. Notice for EIS's are covered by EIS regulation which calls for a 45-day review period, with an optional 15-day extension. Notice of the EIS hearing is generally contained in the Draft EIS. Hearings on EIS's are usually held before the end of the EIS review period, but no earlier than 30 days after the EIS notice. Assistant Administrators or Regional Administrators may further reduce or waive the requirement for advance notice of a hearing in emergency situations where there is imminent danger to public health and safety, or in situations where there is a legally mandated timetable. Assistant Administrators may also reduce this requirement if they determine that all affected parties would benefit from a shorter time period.

Members of the public who object to a waiver may appeal to the Administrator, stating their reasons in detail.

(2) Content of Notice. The notice must identify the matters to be discussed at the hearing and must include or be accompanied by: (a) a discussion of alternatives the public is being asked to comment upon and the agency's tentative conclusions on major issues (if any); (b) information on the availability of an EIS and bibliography of other relevant materials (if appropriate); (c) procedures and contacts for obtaining further information; and (d) information which the agency particularly solicits from the public.

(3) Provision of Information. All reports, EIS's, and other documents and data relevant to the discussions at public hearings must be available to the public on request after the notice, as soon as they become available to agency staff. Background information should be provided no later than 30 days prior to the hearing.

(4) Conduct of Hearing. The agency conducting the hearing must inform the audience of the issues involved in the decision to be made, the considerations the agency will take into account under law and regulations, the agency's tentative conclusions (if any), and the information which the agency particularly solicits from the public. Whenever possible, the hearing room should be set up informally. The agenda should allocate time for presentations, questions and answers, as well as formal commentary on the record. When needed, a pre-hearing meeting to discuss the issues should be held. Procedures must not inhibit free expression of views. When the subject of a hearing addresses conditions in a specific geographic area, the hearing itself should be held in that general area.

(5) Record of Hearing. The hearing record must be left open for at least ten days to receive additional comment, including any from those unable to attend in person, and may be kept open longer, at the discretion of the hearing officer. The agency must prepare a transcript or record of the hearing itself and add additional comments to the complete record of the proceeding. This must be available for public inspection and copying at cost at convenient locations. Alternatively, copies shall be provided free. If tapes are used, they should be available for use and copying on conventional equipment. When a

Responsiveness Summary (see Assimilation below) is prepared after a hearing, it must be provided to those who testified at or attended the hearing, as well as anyone who requests it.

b. *Requirements for advisory groups.* Formation of an advisory group is one of the methods that can be chosen to gain sustained advice from a representative group of citizens.

The primary function of an advisory group is to assist elected or appointed officials by making recommendations to them on issues which the decisionmaking body and the advisory group consider relevant. These issues may include policy development, project alternatives, financial assistance applications, work plans, major contracts, interagency agreements, budget submissions, among others. Advisory groups can provide a forum for addressing issues, promote constructive dialogue among the various interests represented on the group, and enhance community understanding of the agency's action.

(1) Requirements for Federal EPA Advisory Committees: When EPA establishes an advisory group, provisions of the Federal Advisory Committee Act (Pub. L. 92—463) and General Service Administration (GSA) Regulations on Federal Advisory Committee Management must be followed.

(2) Requirements for State and Substate and Local Advisory Committees: (Explanatory Note: The following guidelines do not apply to advisory committees, as defined by the Federal Advisory Committee Act, which are established or utilized by EPA.) In instances where regulations, program guidance, or the public participation work plans of State, substate, or local agencies, call for advisory groups, the following special requirements will apply:

(a) Composition of Advisory Groups. Agencies must try to constitute advisory groups so that the membership includes the major affected parties, reflects a balance of interests, and consists of substantially equivalent proportions of the following groups:

- Private citizens. This portion of the advisory group should not include anyone who is likely to incur a financial gain or loss greater than that of an average homeowner, taxpayer, or consumer as a result of any action that is likely to be taken by the managing agency;
- Individual citizens or representatives of organizations that have substantial economic interests in the plan or project;
- Federal, State, local, and tribal officials. These may be both elected and policy-level appointed officials, so long as the elected officials do not come from the decision-making body the group is advising;
- Representatives of public interest groups. A "public interest group" is an organization which has a general civic, social, recreational, environmental, or public health perspective in the area, and which does not directly reflect the economic interests of its membership.

Generally, where an activity has a particular geographic focus, the advisory group should be composed of persons from that geographic area, unless issues involved are of wider application.

Where problems in meeting the membership compostion arise, the agency should request advice and assistance from EPA or the State in the case of a delegated program. EPA shall review the agency's efforts to comply, and approve the advisory group composition, or, if the agency's efforts were inadequate, require additional actions.

(b) Resources for Advisory Groups. To the extent possible, agencies shall identify professional and clerical staff time which the advisory group may depend upon for assistance, and provide the advisory group with an operating budget which may be used for mailing, duplicating, technical assistance, and other purposes the advisory group and the agency have agreed upon. The agency should establish a system for reimbursing advisory group members for reasonable out-of-pocket expenses that relate to their participation on the advisory group.

(3) Advisory Group Recommendations: Recommendations, including minority reports and the minutes of all meetings of an advisory group, are matters of public information. As soon as these become available to agency staff, the agency must provide them to the public on request and distribute them to relevant public agencies. Advisory groups may communicate with EPA or the public as needed, or request EPA to perform an evaluation of the assisted agency's compliance with the requirements of this part.

4. *Assimilation.* The heart of public participation lies in the degree to which it informs and influences final agency decisions

Assimilating public viewpoints and preferences into final conclusions involves examining and analyzing public comments, considering how to incorporate them into final program decisions, and making or modifying decisions according to carefully considered public views. The agency must then demonstrate, in its decisions and actions, that it has understood and fully considered public concerns. Assimilation of public views must include the following three elements:

a. *Documentation.* The agency must briefly and clearly document consideration of the public's views in Responsiveness Summaries, regulatory preambles, EIS's or other appropriate forms. This should be done at key decision points specified in program guidance or in work for public participation.

b. *Content.* Each Responsiveness Summary (or similar document) must:

—explain briefly the type of public participation activity that was conducted;

—identify or summarize those who participated and their affiliation;

—describe the matters on which the public was consulted;

—summarize the public's views, important comments, criticisms and suggestions;

—disclose the agency's logic in developing decisions; and

—set forth the agency's specific responses, in terms of modifying the proposed action, or explaining why the agency rejected proposals made by the public.

c. *Use.* The agency must use Responsiveness Summaries in its decision-making.

In addition, final Responsiveness Summaries that are prepared by an agency receiving financial assistance from EPA must also include that agency's (and where applicable, its advisory group's) evaluation of its public participation program.

5. *Feedback.* The agency must provide feedback to participants and interested parties concerning the outcome of the public's involvement. Feedback may be in the form of personal letters or phone calls, if the number of participants is small. Alternatively, the agency may mail a Responsiveness Summary to those on the contact list, or may publish it.

a. *Content.* The feedback that the agency gives must include a statement of the action that was taken, and must indicate the effect the public's comments had on that action.

b. *Availability.* Agency officials must take the initiative in giving appropriate feedback, and must assure that all public participants in a particular activity are provided that feedback. As Responsiveness Summaries are prepared, their availability should be announced to the public. When regulations are developed, reprints of preambles and final regulations must be provided to all who commented.

E. Work Plans

A work plan is a written document used for planning a public participation program. It may be an element of regulatory development plans or program plans. Each work plan should include the following elements: objectives, schedules, techniques, audiences and resources requirements. Work plans should be completed on both a program and project level or for each activity identified under Scope of the Policy.

Public participation work plans, undertaken by EPA or by applicants for EPA financial assistance, shall set forth, at a minimum:

1. Key decisions subject to public participation;
2. Staff contacts and budget resources to be allocated to public participation;
3. Segments of the public targeted for involvement;
4. Proposed schedule for public participation activities to impact program decisions;
5. Mechanism to apply the five basic functions—Identification, Outreach, Dialogue, Assimilation, and Feedback—outlined in Section D of this Policy.

Reasonable costs of public participation incurred by assisted agencies, including advisory group expenses, and identified in an approved public participation work plan, will be eligible for financial assistance, subject to statutory or regulatory limitations.

Assistant Administrators and Regional Administrators will ensure that program work plans are developed in a timely manner for use in the annual budget planning process. Work plans will be reviewed by the Special Assistant for Public Participation, who will work with program and regional managers to ensure that work plans adequately carry out this Policy. Work plans may be used as public information documents.

F. Assistance to the Public

EPA recognizes that responsible participation by the various elements of the public in some of the highly technical and complex issues addressed by the agency requires substantial commitments of time, study, research analysis, and discussion. While the Agency needs the perspectives and ideas that citizens bring, it cannot always expect the public to contribute its efforts on a voluntary basis.

Assistant Administrators, Office Directors, and Regional Administrators can provide funds to outside organizations and individuals for public participation activities which they, as EPA managers, deem appropriate and essential for achieving program goals, and which clearly do not involve rulemaking or adjudicative activities.

Participation Funding Criteria—Any financial assistance awarded by the Agency for non-regulatory or non-adjudicatory participation should be based on the following criteria:

(1) whether the activity proposed will further the objectives of this Policy;

(2) whether the activity proposed will result in the participation of interests not adequately represented;

(3) whether the applicant does not otherwise have adequate resources to participate; and

(4) whether the applicant is qualified to accomplish the work.

These are the primary tests for public participation financial assistance. From among those who meet these tests, the Agency will make special efforts to provide assistance to groups who may have had fewer opportunities or insufficient resources to participate.

G. Authority and Responsibility

Public participation has an integral part in the accomplishment of any program. It should routinely be included in decision-making and not be treated as an independent function. Managers shall assure that personnel are properly trained, and that funding needs are incorporated in their specific budgets.

Responsibility and accountability for the adequacy of public participation programs belongs primarily to the Regional Administrators and the Assistant Administrators, under the overall direction of the Administrator.

1. *The Administrator* maintains overall direction and responsibility for the Agency's public participation activities. Specifically, the Administrator, aided by the Special Assistant for Public Participation, will:

(a) establish policy direction and guidance for all EPA public participation programs;

(b) review public participation program work plans, including resource allocations;

(c) coordinate public participation funding to outside groups to ensure the most economical expenditures;

(d) provide technical advice and assistance as appropriate;

(e) develop guidance and training needed to ensure that program personnel are equipped to implement the Policy;

(f) provide incentives to agency personnel to ensure commitment and competence; and

(g) evaluate at least annually the adequacy of public participation activities conducted under this Policy, and the appropriateness and results of public participation expenditures.

2. *Assistant Administrators* have the following responsibilities:

(a) identify and address those activities where application of this Policy is required;

(b) identify and address those forthcoming major policy decisions where the Policy should be applied;

(c) ensure that program work plans are developed annually to provide for adequate public participation in the above decisions and activities;

(d) implement approved work plans for public information and public participation activities;

(e) ensure that, as regulations for the programs cited in the Appendix of the Policy are amended, they incorporate the Policy's provisions;

(f) evaluate the appropriateness of public participation expenditures and activities under their jurisdiction, revising and improving them as necessary;

(g) encourage coordination of public participation activities;

(h) provide guidance and assistance to support regional office activities;

(i) seek public participation in decisions to modify or develop major national policies, at their discretion;

(j) consider funding authorized pilot and/or innovative demonstration projects;

(k) consider measures to ensure Policy implementation in appropriate managers' performance standards;

(l) provide financial assistance, as appropriate and available, for authorized public participation activities at the national level.

3. *Regional Administrators* have the following responsibilities:

(a) identify and address those EPA and EPA-assisted activities where application of this Policy is required;

(b) identify and address those forthcoming EPA and EPA-assisted major policy decisions where the Policy should be applied;

(c) ensure that work plans are developed annually by their programs and recipients to provide for adequate public participation in the above decisions and activities;

(d) implement approved work plans for public information and public participation activities;

(e) ensure that public participation is included by applicants in the development of program funding applications to EPA, and in other decisions as identified by this Policy;

(f) provide guidance and technical assistance to recipients on the conduct of public participation activities;

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(g) evaluate annually public participation activities of State, substate, or local entities revising and improving them as necessary;

(h) encourage coordination of public participation activities;

(i) support and assist the public participation activities of Headquarters;

(j) ensure that Regional staff are trained, and resources allocated for public participation programs;

(k) incorporate measures to ensure Policy implementation in managers' performance standards;

(l) provide small grants to representative public groups for needed public participation work;

(m) evaluate the appropriateness of public participation expenditures and activities, revising and improving them as necessary.

4. *The Director, Office of Public Awareness* has an important role in the development and support of Agency public participation activities. The Director will:

(a) assist Headquarters and regional programs in identifying interested and affected members of the public in compiling project contact lists;

(b) support Headquarters and regional programs in development and distribution of outreach materials to inform and educate the public about environmental programs and issues, and participation opportunities;

(c) develop annual public awareness/participation support plans to complement public participation work plans and identify resource requirements.

H. Compliance

Assistant Administrators, Office Directors, and Regional Administrators are responsible for making certain that, for the activities under their jurisdiction, all those concerned comply with the public participation requirements set forth in this Policy.

Regional Administrators will evaluate compliance with public participation requirements in appropriate State and substate programs supported by EPA financial assistance. This will be done during the annual review of the States' program(s) which is required by grant provisions, and during any other program audit or review.

If the Regional Administrator is not satisfied that this Policy is being carried out, he or she should defer grant award until these conditions can be met where that course is legally permissable. A Regional Administrator may grant a waiver from specific requirements in this Policy upon a showing by the agency that proposed actions will result in substantially *greater* public participation than would be provided by the Policy.

The Administrator of EPA has final authority and responsibility for ensuring compliance. Citizens with information concerning apparent failures to comply with these public participation requirements should first notify the appropriate Regional Administrator or Assistant Administrator, and then if necessary, the Administrator. The Regional Administrator, Assistant Administrator, or Administrator will make certain that instances of alleged noncompliance are promptly investigated and that corrective action is taken where necessary.

Appendix—List of Citations Covering Program Grants, Delegations, or Permits to State and Substate Governments

The Public Participation Policy will be incorporated in program regulations that cover financial assistance or delegations of authority to State or substate governments or approval of State programs. Where consolidated awards exist under these provisions, they also will be covered. Programs under the Clean Water Act, Safe Drinking Water Act, and the Resource Conservation Recovery Act are already covered by this Policy insofar as they have been amended, or will be amended, to incorporate 40 CFR, Part, 25. Consolidated permit programs are covered by 40 CFR, Parts 122, 123, and 124. Regulations that refer to existing programs now covered by the Policy will have to be amended to incorporate its provisions. Where program regulations are not yet written, the Policy shall be incorporated.

Clean Air Act (Pub. L. 95-95)

Air Pollution Control Program Grants

Sec. 105—Grants to State and local air pollution control agencies for support of air pollution planning and control programs. (Catalogue of Federal Domestic Assistance No. 66.001.)

Sec. 106—Grants to interstate air quality agencies and commissions to develop implementation plans for interstate air quality control regions. [When funded].

Urban Mass Transportation Technical Studies Grants (DOT)

Sec. 175—Grants to organizations of local elected officials with transportation or air quality maintenance responsibilities for air quality maintenance planning. (CFDA No. 20.505.)

Sec. 210—Grants to State agencies for developing and maintaining effective vehicle emission devices and systems inspection and emission testing and control programs. [When funded].

Quiet Communities Act (Pub. L. 95-609)

Quiet Communities—State and Local Capacity Building Assistance

Sec. 14(c)—Grants to State and substate governments and regional planning agencies for planning, developing, evaluating, and demonstrating techniques for quiet communities. (CFDA No. 66.031.)

Toxic Substances Control Act (Pub. L. 94-469)

State Toxic Substances Control Projects

Sec. 28—Grants to State for establishing and operating programs to complete EPA efforts in preventing or eliminating risks to health or environment from chemicals. (CFDA No. 66.800.)

Federal Insecticide, Fungicide and Rodenticide Act (Pub. L. 95-396)

Pesticides Enforcement Program Grants

Sec. 23(a)—Funding to States/Indian tribes through cooperative agreements for enforcement and applicator training and certification. (CFDA No. 66.700.)

Resource Conservation and Recovery Act (Pub. L. 94-580)

Sec. 3005(a)—Issuance of permits for treatment, storage and disposal of hazardous waste.

Sec. 3006—Delegation of authority to administer and enforce hazardous waste program.

Sec. 4002—State Planning Guidelines.

Solid and Hazardous Waste Management Program Support Grants

Sec. 4007—Approval for State, local, and regional authorities to implement State or Regional Solid Waste Plans and be eligible for Federal assistance. (CFDA No. 66.451.)

Sec. 4008—Grants to State and substate agencies for solid waste management, resource recovery and conservation, and hazardous waste management. (CFDA No. 66.451.)

Sec. 4009—Grants to States for rural areas solid waste management facilities. (CFDA No. 66.451.)

Solid Waste Management Demonstration Grants

Sec. 8006—Grants to State, municipal, interstate or intermunicipal agency for resource recovery systems or improved solid waste disposal facilities. (CFDA No. 66.452.)

Solid Waste Management Training Grants

Sec. 7007—Grants or contracts for States, interstate agency, municipality and other organizations for training personnel in occupations related to solid waste management and resource recovery. (CFDA No. 66.453.)

Safe Drinking Water Act (Pub. L. 95-190)

Sec. 1421(b)—Issuance of permits for underground injection control programs.

State Public Water System Supervision Program Grants

Sec. 1443(a)—Grants to States for public water system supervison. (CFDA #66.432.)

State Underground Water Source Protection—Program Grants

Sec. 1443(b)—Grants to States for underground water source protection programs. (CFDA #66.433.)

Clean Water Act (Pub. L. 95-217)

Construction Grants for Wastewater Treatment Works

Sec. 201—Grants to State, municipality, or intermunicipal agencies for construction of wastewater treatment works. (CFDA #66.418.)

Water Pollution Control—State and Interstate Program Grants

Sec. 106—Grants to State and interstate agencies for water pollution control administration. (CFDA #66.419.)

Water Pollution Control—State and Areawide Water Quality Management Planning Agency

Sec. 205(g)—Delegation of management of construction grants programs to State designated agency(ies). (CFDA #66.438.)

Sec. 208—Grants for State and areawide waste treatment management planning. (CFDA# 66.426.)

Water Pollution Control—Lake Restoration Demonstration Grants

Sec. 314—Clean Lakes Program.

Sec. 402(a)—Issuance of permits under National Pollutant Discharge Elimination System.

Sec. 404—Issuance of permits for disposal of dredge and fill materials.

Pub. L. 94-580, Sections 3005 & 3006;
Pub. L. 95-190, Sections 1421-1422;
Pub. L. 95-217, Section 402;
Pub. L. 95-217, Section 404;
Pub. L. 95-95, Section 165;
Proposed consolidated permit regulations, covering: Hazardous Waste Program under RCRA; UIC Program under SDWA, NPDES and Section 404 of the Clean Water Act, and the PSD Program under the Clean Air Act.

[FR Doc. 81-1694 Filed 1-16-81; 8:45 am]

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Reference Materials

TITLE	ALTERNATIVE INFORMATION AND INTERACTION APPROACHES TO PUBLIC PARTICIPATION IN WATER RESOURCES DECISION-MAKING. A STATE-OF-THE-ART REPORT.
AUTHOR	DAVIS, ADAM CLARKE; ANDERSON, JILL; AND GOUGH, RICHARD I.
PUB DATE	75
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	WATER RESOURCES; ATTITUDES; CITIZEN PARTICIPATION; DECISION MAKING; REVIEWS; MANAGEMENT; SOCIAL EFFECT; MODELS; PUBLIC OPINION; SOCIOLOGY.
DESC NOTE	49P
ABSTRACT	A STATE-OF-THE-ART PRESENTATION IS MADE ON RESEARCH DEALING WITH THE INFORMATION AND INTERACTION APPROACHES TO PUBLIC PARTICIPATION IN WATER RESOURCES DECISION-MAKING. PUBLIC PARTICIPATION HAS BEEN VIEWED FROM THE STANDPOINT OF PUBLIC ADMINISTRATION, WITH CONCENTRATION ON THE ADVANTAGES AND DISADVANTAGES OF THE INFORMATION AND INTERACTION APPROACHES TO PARTICIPATION FROM WATER RESOURCES AGENCY PERSONNEL AND THE PUBLIC. SEVEN DECISION-PARTICIPATION MODELS INCLUDING THE VARIOUS ACTORS, THEIR ROLES, AND THE EXEMPLARY TECHNIQUES AND TIME REQUIREMENTS ASSOCIATED WITH EACH ARE DISCUSSED. A REVIEW OF THE LITERATURE SHOWS THE MANY DIFFERENT TECHNIQUES EMPLOYED BY AGENCY PERSONNEL TO INVOLVE THE PUBLIC IN THE DECISION-MAKING PROCESS.

TITLE	AREAWIDE WASTE TREATMENT AND WATER QUALITY MANAGEMENT PLAN FOR SOUTHERN ILLINOIS.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	SEWAGE TREATMENT; WATER QUALITY MANAGEMENT; ILLINOIS; CITIZEN PARTICIPATION; MINING: AGRICULTURAL WASTES; REGIONAL PLANNING; CONSTRUCTION; FORESTRY; RURAL AREAS; SEWAGE DISPOSAL; SALT WATER INTRUSION; GROUND WATER; CRUDE OIL; NATURAL GAS; STREAM POLLUTION; RECOMMENDATIONS; FINANCING; LAND USE; RESIDUES: DEGRADATION; CHANNEL IMPROVEMENTS; SOUTHERN REGION ILLINOIS; POINT SOURCES; NONPOINT SOURCES; SILVICULTURE.
DESC NOTE	79P
ABSTRACT	THE AREAWIDE WASTE TREATMENT AND WATER QUALITY MANAGEMENT PLAN FOR SOUTHERN ILLINOIS WAS PREPARED

UNDER SECTION 208 OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (P. L. 92-500). THIS DOCUMENT SUMMARIZED THE PROJECT RESULTS AND PLAN RECOMMENDATIONS IDENTIFIED WITHIN THE TECHNICAL DOCUMENTS COMPRISING THE FOLLOWING APPENDICES: A-1 REPORT ON POINT SOURCES OF POLLUTION IN SOUTHERN ILLINOIS 208 AREA; A-2 MUNICIPAL WASTEWATER NEEDS AND CAPITAL SCHEDULING; B-1 NONPOINT SOURCES OF WATER POLLUTION IN THE 208 AREA; B-2 POLLUTION SOURCES; AGRICULTURE; B-3 RURAL SEWAGE IN THE 208 AREA; B-4 WATER QUALITY INVESTIGATIONS IN CEDAR LAKE PART 1, WATER QUALITY INVESTIGATIONS IN REND LAKE PART 2; B-5 THE RESTORATION AND MAINTENANCE OF HIGH QUALITY WATER; B-6 LAND USE IN THE 208 AREA; C-1 ENERGY REPORT; EVALUATION OF AREAWIDE COAL PRODUCTION AND FUTURE PROJECTIONS; C-2 GEOLOGY OF THE COAL-MINING PORTION OF THE SOUTHERN ILLINOIS 208 AREA AND ITS APPLICATIONS TO WATER QUALITY PROBLEMS; C-3 SUMMARY; *C-3 TECHNICAL REPORT FOR SOUTHERN ILLINOIS 208 MINE WASTES CONTROL PROGRAM; C-4 THE 208 MACROINVERTEBRATE STUDY REPORT; THE EFFECTS OF ACID MINE DRAINAGE ON MEAN SPECIES IN SIX SOUTHERN ILLINOIS STREAMS; D AREAWIDE MANAGEMENT STRATEGY FOR WATER QUALITY; E ENVIRONMENTAL ASSESSMENT: G PUBLIC PARTICIPATION AND PLANNING COORDINATION; A PROGRESS REPORT.

TITLE AREAWIDE WASTE TREATMENT AND WATER QUALITY MANAGEMENT PLANNING. APPENDIX G. PUBLIC PARTICIPATION AND PLANNING COORDINATION: A PROGRESS REPORT.

PUB DATE 78

AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC WATER QUALITY MANAGEMENT; ILLINOIS; CITIZEN PARTICIPATION; PUBLICITY; COMMUNICATION; REGIONAL PLANNING; MANAGEMENT PLANNING; WATER POLLUTION CONTROL; REGULATIONS; OBJECTIVES; WATER POLLUTION ABATEMENT; SOUTHERN REGION ILLINOIS.

DESC NOTE 111P

ABSTRACT THE PUBLIC PARTICIPATION AND PLANNING COORDINATION: A PROGRESS REPORT IS APPENDIX G OF THE AREAWIDE WASTE TREATMENT AND WATER QUALITY MANAGEMENT PLAN FOR SOUTHERN ILLINOIS. THE REPORT WAS PREPARED UNDER SECTION 208 OF THE WATER POLLUTION CONTROL ACT, AS AMENDED. IT ADDRESSES THE PARTICIPATION OF THE PUBLIC IN THE FORMULATION OF THE AREAWIDE WASTE TREATMENT AND WATER QUALITY MANAGEMENT PLAN FOR SOUTHERN ILLINOIS. THE IMPACT

	OF PUBLIC PARTICIPATION ON THE PLAN IS IDENTIFIED, DOCUMENTED, AND ASSESSED IN THIS REPORT.
TITLE	AREAWIDE WASTE TREATMENT MANAGMENT PLAN FOR THE GREATER HOUSTON AREA.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	MANAGEMENT PLANNING; WATER QUALITY; WATER POLLUTION; CITIZEN PARTICIPATION; ENVIRONMENTAL IMPACTS; LAKE HOUSTON; CLEAR LAKE; SAN JACINTO RIVER; LOCAL GOVERNMENT; INDUSTRIAL WASTE TREATMENT; TEXAS; FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972; HOUSTON, TEXAS; WATER POLLUTION CONTROL; SEWAGE TREATMENT PLANTS.
DESC NOTE	69P
ABSTRACT	THE REPORT SUMMARIZES FINDINGS AND RECOMMENDATINS OF A THREE-YEAR WATER QUALITY PLANNING EFFORT IN THE HOUSTON AREA. THE PLAN WAS AUTHORIZED UNDER THE PROVISIONS OF SECTION 208 OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (P. L. 92-500) AND FUNDED IN TOTAL BY A GRANT OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY. THE UNIQUE ASPECTS OF THE 208 PLANNING PROGRAM INCLUDE: (1) UNDERSTANDING THE SIGNIFICANCE OF WATER POLLUTANTS COMING FROM SOURCES OTHER THAN MUNICIPAL AND INDUSTRIAL WASTEWATER TREATMENT PLANTS, (2) EMPHASIZING NOT ONLY WHAT NEEDS TO BE DONE BUT ALSO HOW AND WHEN IT IS TO BE ACCOMPLISHED AND WHO WILL BE RESPONSIBLE, (3) DEVELOPING LOCAL SOLUTIONS TO LOCAL PROBLEMS, AND (4) PUBLIC PARTICIPATION THROUGHOUT DEVELOPMENT. SINCE THE 208 PROGRAM IS AN ON-GOING EFFORT, NEW AND BETTER INFORMATION WILL BE UTILIZED. IN THE MEANTIME, THE RESJLTS OF THE INITIAL EFFORT WILL SERVE AS A BASE FOR MAKING INFORMED DECISIONS CONCERNING WATER QUALITY.
TITLE	AREAWIDE WASTE TREATMENT MANAGEMENT PLAN FOR THE GREATER HOUSTON AREA: HEARING DRAFT SUMMARY.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	SEWAGE TREATMENT; MANAGEMENT PLANNING; WATER QUALITY; WATER POLLUTION; CITIZEN PARTICIPATION; ENVIRONMENTAL IMPACTS; LAKE HOUSTON; CLEAR LAKE; SAN JACINTO RIVER; LOCAL GOVERNMENT; INDUSTRIAL WASTE TREATMENT; TEXAS; FEDERAL WATER POLLUTION

CONTROL ACT AMENDMENTS OF 1972; HOUSTON, TEXAS; WATER POLLUTION CONTROL; SEWAGE TREATMENT PLANTS.

DESC NOTE 46P.

ABSTRACT THE REPORT SUMMARIZES THE RECOMMENDATIONS, IMPLEMENTATION REQUIREMENTS AND IMPACT ASSESSMENT FOR THE AREAWIDE WASTE TREATMENT MANAGEMENT PLAN FOR THE GREATER HOUSTON AREA. THE PLAN WAS PREPARED BY THE HOUSTON-GALVESTON AREA COUNCIL UNDER THE PROVISIONS OF SECTION 208 OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (P. L. 92-500). REGULATIONS PASSED BY THE U. S. ENVIRONMENTAL PROTECTION AGENCY TO MEET THE REQUIREMENTS OF THE ACT SPECIFY 16 REQUIRED OUTPUTS. A SUMMARY OF THESE REQUIREMENTS AND THE RELATED DOCUMENTS PREPARED FOR THE HOUSTON AREA 208 PROGRAM IS PRESENTED. IN ADDITION TO THE REQUIRED OUTPUTS, PARTICULAR EMPHASIS HAS BEEN PLACED ON PUBLIC PARTICIPATION. THE REPORT INCLUDES MODIFICATIONS MADE AS A RESULT OF PUBLIC INPUT RECEIVED DURING THE REVIEW AND HEARING PROCESS.

TITLE AREAWIDE WASTE TREATMENT MANAGEMENT PLAN FOR THE GREATER HOUSTON AREA (SECTION 208, PL 92-500): PUBLIC PARTICIPATION SUMMARY.

PUB DATE 78

AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC SEWAGE TREATMENT; MANAGEMENT PLANNING; WATER QUALITY; WATER POLLUTION; CITIZEN PARTICIPATION; ENVIRONMENTAL IMPACT; LAKE HOUSTON; CLEAR LAKE; SAN JACINTO RIVER; LOCAL GOVERNMENT; INDUSTRIAL WASTE TREATMENT; TEXAS; FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972; HOUSTON, TEXAS; WATER POLLUTION CONTROL; SEWAGE TREATMENT PLANTS.

DESC NOTE 63P

ABSTRACT THE REPORT SUMMARIZES THE PUBLIC PARTICIPATION PROGRAM DEVELOPED AND IMPLEMENTED BY THE HOUSTON-GALVESTON AREA COUNCIL (H-GAC) TO EMBRACE THE INTENT OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972 (EWPCA). THE H-GAC WAS DESIGNATED AS THE PLANNING AGENCY RESPONSIBLE FOR AREAWIDE WASTE TREATMENT MANAGEMENT PLANS FOR THE GREATER HOUSTON AREA PURSUANT TO SECTION 208 OF THE EWPCA. THE AUTHORS OF THE EWPCA REALIZED THAT IN ORDER TO ENSURE SUCCESSFUL PLANNING FOR AN IMPLEMENTATION OF THE OBJECTIVES OF THE CLEAN WATER ACT, PUBLIC PARTICIPATION MUST BE AN INTEGRAL PART OF THE PLANNING AND DECISION-MAKING

PROCESS. THE PUBLIC PARTICIPATION PROGRAM FOR THE GREATER HOUSTON AREA 208 PLAN UTILIZES FEDERAL DOCUMENTS DESCRIBING REQUIREMENTS AND METHODS FOR PUBLIC PARTICIPATION AND ALSO EXTENDS INTO OTHER AREAS OF DISTRIBUTION, CITIZEN EDUCATION, INVOLVEMENT AND PLAN REVIEW. THE REPORT DESCRIBES THE PUBLIC PARTICIPATION PROGRAM DEVELOPED AND IMPLEMENTED FOR THE GREATER HOUSTON AREA 208 PLAN.

TITLE THE ART OF PUBLIC SPEAKING.
AUTHOR BEVERIDGE, ALBERT J.
PUB DATE 74
AVAIL NASH QUALITY PAPERBACK, LOS ANGELES, CALIFORNIA.
DESC NOTE 68P.
ABSTRACT PROBABLY THE CLASSIC BOOK IN PUBLIC SPEAKING WRITTEN IN 1924 BY A FORMER SENATOR AND PULITIZER PRIZEWINNING BIOGRAPHER. VIEWS PUBLIC SPEAKING AS AN ART LIKE MUSIC, PAINTING AND SCULPTURE. STILL, AN ART IS A CRAFT, AND BEVERIDGE WRITES BRIEFLY AND ELOQUENTLY ON HOW TO EMPLOY THE ELEMENTS OF THE CRAFT, FAITH (IN YOUR SUBJECT), KNOWLEDGE, CLARITY, HUMOR, FAIRNESS COMPOSURE, ENUNCIATION, MASTERY, APPEARANCE, APPLAUSE, AND BREVITY. CAN BE READ QUICKLY--AND YOU WILL REFER TO IT AGAIN.

TITLE CALTRANS PUBLIC PARTICIPATION PROGRAM: AN EVALUATION AND SOME RECOMMENDATIONS.
AUTHOR ROSENER, JUDY B.
PUB DATE 75
AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC TRANSPORTATION; REGIONAL PLANNING; CITIZEN PARTICIPATION; STATE GOVERNMENT; STANDARDS; SOCIAL SERVICES; SERVICES; SERVICE RELATED ORGANIZATIONS; REGULATIONS; PUBLIC POLICY; PUBLIC OPINION; PUBLIC FACILITIES; PRIVATE FACILITIES; PRIVATE ORGANIZATIONS; PRIORITIES; PLANNING; ORGANIZING: NONPROFIT ORGANIZATIONS; METHODOLOGY; INTEREST GROUPS; INPUT; INFORMATION SERVICES; EVALUATION; DELIVERY; DECISION-MAKING; DECENTRALIZATION; CRITERIA; COORDINATION; COMMUNITY RELATIONS; COMMUNITIES; COMMUNICATIONS; COMMUNICATING; ARRANGEMENTS; AGENCY ROLE; ADMINISTRATIVE SUPPORT; ADMINISTRATION; CALIFORNIA; SURVEYS.
DESC NOTE 106P
ABSTRACT THE PUBLIC PARTICIPATION PROGRAM OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) WAS EVALUATED. A SIMPLE SURVEY IN THE FORM OF A

MATRIX WAS SENT TO 158 PARTICIPANTS IN THE CALIFORNIA TRANSPORTATION PLANNING PROCESS. REPRESENTATIVES FROM LOCAL GOVERNMENT AND LOBBYISTS WERE INCLUDED IN THE MAILING. THE RESPONSE RATE WAS 24 PERCENT. THE SURVEY WAS DESIGNED TO OBTAIN INFORMATION ABOUT PERCEPTIONS OF PUBLIC PARTICIPATION PROGRAM ACTIVITIES. DOCUMENTATION PROVIDED BY CALTRANS, ALONG WITH INTERVIEW DATA, WERE ANALYZED AND USED TO MEASURE PROGRAM ACTIVITIES AGAINST OBJECTIVES. ISSUES IMPORTANT IN UNDERSTANDING AND IMPROVING THE PUBLIC PARTICIPATION PROGRAM WERE IDENTIFIED. STATE PROGRAM EVALUATION DATA ARE PRESENTED IN TABULAR FORM. IT IS FELT THAT A "GOOD FAITH" EFFORT WAS MADE BY CALTRANS TO MEET STATE PARTICIPATION PROGRAM GOALS AND OBJECTIVES. THE STATE PARTICIPATION PLAN CONSISTS PRIMARILY OF AN OUTLINE OF SPECIFIC CITIZEN PARTICIPATION ACTIVITIES AND COMMENTS ABOUT THEIR IMPLEMENTATION. FUNCTIONS WHICH SURVEY RESPONDENTS FELT DID AND SHOULD BE PERFORMED BY THE CALTRANS PUBLIC PARTICIPATION PROGRAM AS A WHOLE ARE TO MAKE VISIBLE GOVERNMENTAL ACTION, TO ANSWER QUESTIONS, AND TO PROVIDE AN OPPORTUNITY FOR THE REVIEW OF PROPOSALS. WEAKNESSES OF THE STATE PARTICIPATION PROGRAM ARE DISCUSSED, AND RECOMMENDATIONS FOR PROGRAM IMPROVEMENT ARE OFFERED. APPENDICES CONTAIN ADDITIONAL INFORMATION ON PROCEDURES USED IN THE EVALUATION STUDY AND THE MATRIX EMPLOYED TO OBTAIN PARTICIPANT DATA. A BIBLIOGRAPHY IS PROVIDED.

TITLE	CHESAPEAKE BAY FUTURE CONDITIONS REPORT, VOLUME II, STUDY COORDINATION, PUBLIC PARTICIPATION.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CHESAPEAKE BAY; ENVIRONMENTAL MANAGEMENT; WATER RESOURCES; PLANNING; HISTORY; ECONOMIC ANALYSIS; SOCIOLOGY; COASTAL REGIONS; MARYLAND; VIRGINIA; COMMUNITY RELATIONS; REGIONAL PLANNING; PUBLIC PARTICIPATION.
DESC NOTE	185P
ABSTRACT	THE SUBJECT OF THIS PARTICULAR VOLUME IS THE CHESAPEAKE BAY STUDY PROCESS AND AS SUCH FOCUSES

ON THE HISTORY OF THE STUDY, THE STUDY ORGANIZATION, AND THE MANNER IN WHICH THE STUDY WAS COORDINATED AMONG THE MANY FEDERAL, STATE, AND LOCAL AGENCIES THAT ARE INTERESTED IN WATER RESOURCES DEVELOPMENT IN THE BAY REGION. IN ADDITION, IT INCLUDES A DISCUSSION OF THE ROLE THAT PUBLIC PARTICIPATION AND INFORMATION HAS PLAYED IN THE CHESAPEAKE BAY STUDY. THE VARIOUS ELEMENTS OF THE "PUBLIC" ARE DEFINED AND A DESCRIPTION OF THE MANY USERS OF THE BAY IS PROVIDED. ALSO INCLUDED IS A DISCUSSION OF THOSE PUBLIC PARTICIPATION AND INFORMATION ACTIVITIES WHICH HAVE BEEN CONDUCTED THUS FAR IN THE CHESAPEAKE BAY STUDY PROGRAM. FINALLY, THOSE PUBLIC INVOLVEMENT ACTIVITIES REQUIRED TO ACHIEVE AN EFFECTIVE WATER-LAND MANAGEMENT PROGRAM FOR THE BAY ARE ANALYZED IN THE LAST CHAPTER OF THIS APPENDIX.

TITLE	THE CHESAPEAKE BAY PROGRAM PROJECT SUMMARIES.
AUTHOR	WELLS, HARRY W.; ALLEN, WILLIAM C.; REACTOR, HARRY E.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	PROJECT PLANNING; RESEARCH PROJECTS; CHESAPEAKE BAY; MANAGEMENT; TOXICITY: AQUATIC PLANTS; ABUNDANCE; WATER POLLUTION; POTOMAC RIVER: WATERSHEDS; LAND USE; ASSESSMENTS; CITIZEN PARTICIPATION; WATER QUALITY; OBJECTIVES; BUDGETING; ORGANIZATIONS; PESTICIDES; PERSONNEL; DOCUMENTATION; EUTROPHICATION; HABITATS.
DESC NOTE	79
ABSTRACT	"THE CHESAPEAKE BAY PROGRAM, PROJECT SUMMARIES," IS A COMPILATION OF 44 1-PAGE REPORTS ASSEMBLED TO GIVE THE READER ADMINISTRATIVE DATA INCLUDING PERFORMING ORGANIZATION, PRINCIPAL INVESTIGATOR, PROJECT OFFICER, PROJECT PERIOD, PROJECT NUMBER AND FUNDING AND SUMMARIES DISCUSSING THE OBJECTIVES, SCIENTIFIC APPROACH, AND PRODUCTS FOR EACH PROJECT. THE REPORT IS DIVIDED INTO SEVEN SEPARATE AREAS: (1) TOXICS, (2) SAV, (3) EUTROPHICATION, (4) ENVIRONMENTAL MANAGEMENT, (5) STATE PARTICIPATION, (6) PUBLIC PARTICIPATION, AND (7) DATA MANAGEMENT. EACH AREA INCLUDES A BRIEF INTRODUCTION EXPLAINING THE IMPORTANCE OF THE STUDY IN RELATION TO THE CHESAPEAKE BAY PROGRAM.

TITLE	A CITIZEN'S HANDBOOK FOR EVALUATING COMMUNITY IMPACTS. PAPERS IN COMMUNITY DEVELOPMENT: NO. 1.
AUTHOR	GIBSON, LAY JAMES; AND OTHERS.
PUB DATE	SEP 79.
AVAIL	ARIZONA UNIVERSITY, COOPERATIVE EXTENSION SERVICE, TUCSON, ARIZONA.
DESC	CAREER EDUCATION; *COMMUNITY CHANGE; COMMUNITY DEVELOPMENT; *COMMUNITY SERVICES; *ECONOMIC CHANGE; ECONOMIC DEVELOPMENT; ECONOMIC PROGRESS; *EMPLOYMENT PROJECTION; *EVALUTAION HOUSING; *POPULATION TRENDS; QUALITY OF LIFE; SANITATION SERVICES; SOCIAL SERVICES; TRANSPORTATION; UTILITIES; WASTE DISPOSAL.
DESC NOTE	67P
ABSTRACT	ORGANIZED IN A SERIES OF LOGICALLY ORDERED PLANNING COMPONENTS, THIS CITIZEN'S HANDBOOK SEEKS TO DEVELOP LOCAL EXPERTISE FOR EVALUATING MAJOR ECONOMIC IMPACTS (ECONOMIC GROWTH OR DECLINE) IN NONMETROPOLITAN CENTERS. IN EACH SECTION THE USER IS GUIDED THROUGH A SET OF SIMPLE CALCULATIONS WHICH PROVIDE QUANTITATIVE ANSWERS REGARDING A PARTICULAR AREA OF IMPACT. AN INTRODUCTION DISCUSSES USE OF THE HANDBOOK AND LISTS SOME PRELIMINARY QUESTIONS WHICH MUST BE ANSWERED. THE REMAINDER OF THE HANDBOOK IS DIVIDED INTO TWO PARTS CONCERNING THE TWO KINDS OF IMPACT: GROWTH AND DECLINE. PART A DEALS WITH NEW DEVELOPMENT AND PART B WITH THE LOSS OF A MAJOR EMPLOYER. BOTH PARTS ARE PARALLEL IN OUTLINE SINCE THE SAME ISSUES MUST BE CONFRONTED. THE FOUR MAJOR TOPICS IN EACH PART ARE (1) ECONOMIC AND DEMOGRAPHIC IMPACTS (EMPLOYMENT POPULATION), (2) HOUSING AND TRANSPORTATION, (3) ENVIRONMENTAL SERVICES (WATER, SEWER, SOLID WASTE), AND (4) SOCIAL SERVICES (EDUCATION, HEALTH CARE, PUBLIC SAFETY, QUALITY OF LIFE). IN EACH SECTION SOME QUESTIONS CONCERNING IMPACT ARE ANSWERED AND THEN QUESTIONS USING SAMPLE DATA AND/OR REGARDING ONE'S COMMUNITY ARE GIVEN FOR USER SOLUTION. A SUMMARY CONCLUDES EACH SECTION.

TITLE	CITIZEN INVOLVEMENT IN OCPC 208 PLANNING A PROGRESS REPORT.
AUTHOR	U.S. ENVIRONMENTAL PROTECTION AGENCY.
PUB DATE	76
AVAIL	U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC.
ABSTRACT	A COMPLETE DOCUMENTATION OF THE OLD COLONY PLANNING COUNCIL'S CITIZEN INVOLVEMENT PROGRAM INCLUDING ADVISORY COMMITTEE ACTIVITIES QUANTIFIED AS MUCH AS IS FEASIBLE.

TITLE	CITIZEN INVOLVEMENT IN LAND USE GOVERNANCE.
AUTHOR	ROSENBAUM, NELSON M.
PUB DATE	76
AVAIL	THE URBAN INSTITUTE, WASHINGTON, DC.
ABSTRACT	AN OVERVIEW OF THE ACADEMIC LITERATURE DESCRIBING EFFORTS AT CITIZEN INVOLVEMENT IN LAND USE PLANNING.

TITLE	CITIZEN PARTICIPATION IN AMERICA.
AUTHOR	LANGTON, STUART.
PUB DATE	78
AVAIL	LEXINGTON BOOKS, LEXINGTON, MASSACHUSETTS.
ABSTRACT	AN OVERVIEW OF THE ACADEMIC LITERATURE RELATED TO CITIZEN PARTICIPATION.

TITLE	CITIZEN PARTICIPATION IN WATER POLICY FORMATION.
AUTHOR	DOERKSEN, HARVEY R.; PIERCE, JOHN C.
PUB DATE	75
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CITIZEN PARTICIPATION; WATER RESOURCES; DECISION-MAKING; URBAN SOCIOLOGY; LOCAL GOVERNMENT; PUBLIC OPINION; ATTITUDES; GOVERNMENT POLICIES; WASHINGTON STATE.
DESC NOTE	43P
ABSTRACT	BASED ON A SURVEY OF 1300 HOUSEHOLDS IN THE STATE OF WASHINGTON. THIS PAPER EXAMINES PUBLIC PARTICIPATION AND THE LEVEL OF PUBLIC SUPPORT IN THE WATER RESOURCE POLICY AREA. THE THREE DECISION-MAKING LOCATIONS PREFERRED BY THE PUBLIC WERE WATER EXPERTS, GROUPS OF CITIZENS ADVISING, AND ADMINISTRATORS WITH EXPERT ADVICE. LEAST PREFERRED WERE THE MORE POLITICAL LOCATIONS--STATE LEGISLATURE, INTEREST GROUPS, AND POLITICAL PARTIES. THE GENERAL PUBLIC WAS RANKED BETWEEN THESE TWO GROUPS OF DECISION-MAKING LOCATIONS. THE MOST PREFERRED WAYS BY WHICH THE PUBLIC MIGHT INFLUENCE POLICY WERE CITIZEN ADVISORY COMMITTEES, PUBLIC HEARINGS, INITIATIVE AND PETITIONS, AND ELECTIONS. THE LEAST PREFERRED PROCESSES WERE CONTACTING STATE LEGISLATORS, CONTACTING AGENCY PEOPLE, AND CONTACTING INTEREST GROUPS AND POLITICAL PARTIES. THE ORDER OF PRIORITIES RANGED FROM THOSE IN WHICH THE PUBLIC HAS MORE DIRECT FORMAL CONTROL, TO THOSE IN WHICH THE PUBLICS INFLUENCE IS MORE INDIRECT AND INFORMAL.

TITLE	CITIZEN PARTICIPATION PERSPECTIVES.
AUTHOR	LANGTON, STUART.
PUB DATE	79
AVAIL	LINCOLN FILENE CENTER FOR CITIZENSHIP AND PUBLIC AFFAIRS, TUFTS UNIVERSITY, MEDFORD, MASSACHUSETTS.
ABSTRACT	THIS CONTAINS THE PROCEEDINGS OF THE NATIONAL CONFERENCE ON CITIZEN PARTICIPATION, WHICH INCLUDED DISCUSSIONS AND PAPERS BY ACADEMICS, PRACTITIONERS, REPRESENTATIVES OF GOVERNMENT AGENCIES, AND "PUBLIC INTEREST" GROUPS.

TITLE	CLASSIFICATION AND TEST OF PUBLIC PARTICIPATION CONCEPTS APPLIED TO LOCAL RESOURCE PLANNING.
AUTHOR	LAMM, W. THOMAS.
PUB DATE	75
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	REGIONAL PLANNING; CITIZEN PARTICIPATION; RESOURCES; MANAGEMENT PLANNING; MANAGEMENT METHODS; DECISION-MAKING; ENVIRONMENTAL IMPACTS; THESES; REVIEWS; INFORMATION SYSTEMS; LAND DEVELOPMENT; WATER RESOURCES; MUNICIPALITIES; WISCONSIN; COMMUNITY RELATIONS; ATTITUDE SURVEYS.
DESC NOTE	205P
ABSTRACT	AN ANALYSIS OF RESOURCE PROBLEM DEFINITION AND SOLUTION IS PROVIDED IN TERMS OF CONCEPTS ABOUT HOW THE PUBLIC PARTICIPATES IN EXPRESSING AND DEFINING ENVIRONMENTAL AND RESOURCE PROBLEMS AND INFLUENCING THE ACTIONS TAKEN. THESE CONCEPTS ARE TRACED FROM THEIR PHILOSOPHICAL AND THEORETICAL BASES, THROUGH CONSIDERATIONS OF THE PLANNING PROCESS, AND FINALLY TO DISCUSSIONS OF SEVERAL CONTEMPORARY PARTICIPATION TECHNIQUES AND COMMUNICATION METHODS. A PROPOSED PLANNING RESEARCH METHODOLOGY IS DESCRIBED, USING THE PREVIOUS DISCUSSIONS AS A GUIDE FOR ITS RATIONALE AND USE.

TITLE	COMMUNITY INTERACTION IN TRANSPORTATION SYSTEMS AND PROJECT DEVELOPMENT: A FRAMEWORK FOR APPLICATION.
AUTHOR	YUKUBOUSKY, RICHARD.
PUB DATE	73
AVAIL	NEW YORK STATE DEPARTMENT OF TRANSPORTATION, ALBANY, NEW YORK.

ABSTRACT	AN EXHAUSTIVE CATALOG OF PUBLIC INVOLVEMENT TECHNIQUES.

TITLE	CONTINUING PLANNING PROCESS FOR WATER QUALITY STANDARDS IMPLEMENTATION. VOLUME I. FISCAL YEAR 1978.
PUB DATE	77.
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	STANDARDS; WATER POLLUTION; ILLINOIS; PROJECT PLANNING; WATER QUALITY MANAGEMENT; NATIONAL GOVERNMENT; GOVERNMENT POLICIES; AREAS; RIVERS; STATE GOVERNMENT; REGIONAL PLANNING; LOCAL GOVERNMENT; ORGANIZATIONS; CITIZEN PARTICIPATION; WASTE POLLUTION STANDARDS; INTERGOVERNMENTAL FRAMEWORK.
DESC NOTE	78P
ABSTRACT	CONTENTS: OVERVIEW OF THE ILLINOIS WATER POLLUTION CONTROL PROGRAM; PURPOSE AND SCOPE OF WATER QUALITY PLANNING IN ILLINOIS: PLANNING AREAS; ORGANIZATION AND RESPONSIBILITY FOR WATER QUALITY PLANNING; ADVISORY COMMITTEES AND TASK FORCES; PUBLIC INVOLVEMENT; APPROACH TO BE USED FOR WATER QUALITY MANAGEMENT PLANNING; RECOMMENDATIONS FOR MANAGEMENT AGENCY DESIGNATIONS; PLAN ADOPTION AND AMENDMENT PROCEDURES: COORDINATION WITH OTHER PLANNING AND NATURAL RESOURCE MANAGEMENT PROGRAMS; INTERGOVERNMENTAL CONTRIBUTIONS TO STATE AND AREAWIDE PLANNING; SUMMARY OF PUBLIC PARTICIPATION.

TITLE	CONTROL OF WATER POLLUTION FROM LAND USE ACTIVITIES IN THE CANADIAN GREAT LAKES BASIN: AND EVALUATION OF LEGISLATIVE, REGULATORY AND ADMINISTRATIVE PROGRAMS.
AUTHOR	CASTRILLI, J. F.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	LAND USE; WATERSHEDS; GREAT LAKES; WATER POLLUTION ABATEMENT; LEGISLATION; CANADA; WATER POLLUTION CONTROL; MANAGEMENT; ENVIRONMENTAL IMPACT; PROJECT PLANNING; GOVERNMENT POLICIES; REVIEWS; PUBLIC PARTICIPATION; LAW JURISPRUDENCE; DECISION-MAKING; LAW ENFORCEMENT; EDUCATION; LEGISLATION.
DESC NOTE	447P
ABSTRACT	THIS REPORT EXAMINES THE LEGISLATION, REGULATIONS AND NON-STATUTORY GOVERNMENT PROGRAMS WHICH ARE

BEING OR WHICH COULD BE USED TO CONTROL NONPOINT SOURCE POLLUTION IN THE CANADIAN GREAT LAKES BASIN. IT IDENTIFIES THE PRINCIPAL AGENCIES AND GOVERNMENT LEVELS WITH ROLES IN THIS AREA, AND OFFERS AN EVALUATION OF CONTROL EFFORTS AND POLICIES TO DATE. THE TECHNICAL/PHYSICAL NATURE OF THE NONPOINT POLLUTION PROBLEM IS REVIEWED AND A SUMMARY ANALYSIS OF THE INSTITUTIONAL ARRANGEMENTS AVAILABLE FOR CONTROLLING THE VARIOUS LAND USE IMPACTS TO WATER QUALITY AND RESOURCES IS PROVIDED. INSTITUTIONAL MECHANISMS REVIEWED INCLUDE PLANNING, POLLUTION CONTROL, FISCAL AND PROPRIETARY/MANAGEMENT SCHEMES, BOTH LEGISLATED AND NON-LEGISLATED. THE ROLE OF THE PUBLIC IS CONSIDERED AS WELL AS KEY JUDICIAL DECISIONS AFFECTING THE NATURE AND EXTENT OF LEGISLATION AND ITS ENFORCEMENT IN THIS GENERAL AREA. ENVIRONMENTAL LEGISLATION CAN PROHIBIT POLLUTION FROM DIFFUSE OR NONPOINT SOURCES, BUT PRESENT IMPLEMENTATION CAN BE INEFFECTIVE AND UNSYSTEMATIC.

TITLE	DEVELOPMENT PRIORITIES IN THE WEST RIVER REGION, NORTH DAKOTA, A SOCIAL ATTITUDE AND COMMUNICATION ANALYSIS.
AUTHOR	BOWES, JOHN E.; STAMM, KEITH R.
PUB DATE	74
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	REGIONAL PLANNING; PARTICIPATIVE MANAGEMENT; PUBLIC RELATIONS; COMMUNICATIONS MANAGEMENT; COMMUNITY DEVELOPMENT; PUBLIC OPINION; ATTITUDES; INFORMATION SYSTEMS; PREDICTIONS; SURVEYS; DATA ACQUISITIONS; NORTH DAKOTA.
DESC NOTE	157P
ABSTRACT	THIS REPORT PRESENTS AN INTENSIVE ANALYSIS OF SOCIAL VARIABLES - SUCH AS PUBLIC ATTITUDES, COMMUNITY NEEDS AND INFORMATION - THAT ARE IMPORTANT TO THE PLANNING AND INFORMED PUBLIC PARTICIPATION IN THE DEVELOPMENT OF THE WEST RIVER REGION. THE ANALYSIS HAS BOTH PREDICTIVE AND DESCRIPTIVE GOALS, DESCRIBING THE PRESENT STATE OF PUBLIC OPINION ON REGIONAL DEVELOPMENT, AND GATHERING INFORMATION PREDICTIVE OF EVENTUAL PUBLIC SATISFACTION WITH THE DEVELOPMENT RESULTS.

TITLE	EDUCATION OF WATER RESOURCES PLANNERS AND MANAGERS FOR EFFECTIVE PUBLIC PARTICIPATION.
AUTHOR	ALBERT, HAROLD E.

PUB DATE 78

AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC CITIZEN PARTICIPATION; WATER RESOURCES; MEETINGS; PARTICIPATIVE MANAGMENT; GOVERNMENT AGENCIES; NATIONAL GOVERNMENT; STATE GOVERNMENT; LOCAL GOVERNMENT; INDUSTRIES; UNIVERSITIES; DECISION-MAKING; PROFESSIONAL PERSONNEL; ATTITUDES

DESC NOTE 194P

ABSTRACT WATER RESOURCES DEVELOPMENT SHOULD PROVIDE MEASURES AND FACILITIES WHICH ARE RESPONSIVE TO THE LONG-RUN NEEDS AND EVOLVING PREFERENCES OF THE PUBLIC. AN IMPORTANT MEANS OF ACHIEVING THIS GOAL IS EFFECTIVE PARTICIPATION IN WATER RESOURCES PLANNING AND MANAGEMENT. IN ORDER TO ACHIEVE THIS, KEY REPRESENTATIVES OF THE DIVERSE INTEREST GROUPS AND OF THE PUBLIC MUST BE SUFFICIENTLY FAMILIAR WITH BOTH THE OBVIOUS AND THE SUBTLE DIMENSIONS OF PUBLIC PARTICIPATION, AND MUST BE AWARE OF OBJECTIVES AS WELL AS ALTERNATIVE APPROACHES TO THE PROCESS. PARTICIPANTS AT THIS SYMPOSIUM INCLUDED REPRESENTATIVES FROM FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCIES, AND FROM PRIVATE INTEREST GROUPS.

TITLE EFFECTIVE CITIZEN PARTICIPATION IN TRANSPORTATION PLANNING, VOLUMES I AND II.

AUTHOR JORDAN, DESOTO; ARNSTEIN, SHERRY R.; GRAY, JUSTIN; ET AL.

PUB DATE 76

AVAIL FEDERAL HIGHWAY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, WASHINGTON, DC.

ABSTRACT VOLUME I PROVIDES A MODEL FOR DESIGN OF COMMUNITY INVOLVEMENT PROGRAMS. VOLUME II IS A PARTICULARLY VALUABLE CATALOG OF COMMUNITY INVOLVEMENT TECHNIQUES.

TITLE ENVIRONMENTAL PUBLIC PARTICIPATION, INFORMATION AND EDUCATION PROGRAMS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, STATE OF SOUTH DAKOTA.

AUTHOR ZENI, PHILLIP T.

PUB DATE 74

AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC	POLLUTION; REGIONAL PLANNING; SOUTH DAKOTA; STATE GOVERNMENT; ENVIRONMENTS; INFORMATION SYSTEMS; PROJECTS; EDUCATION; PUBLIC RELATIONS; SURVEYS; PARTICIPATIVE MANAGEMENT.
DESC NOTE	50P
ABSTRACT	THE PURPOSE OF DESIGNING AND CONDUCTING THIS STUDY WAS TO HELP THE STATE OF SOUTH DAKOTA OBTAIN AN ASSESSMENT OF THE NEEDS WHICH EXIST FOR A PUBLIC PARTICIPATION, INFORMATION AND EDUCATION PROGRAM FOR ENVIRONMENTAL PROTECTION AND TO DEVELOP A PLAN FOR MEETING THOSE NEEDS. SUCH A PLAN IS CONTAINED IN THIS STUDY REPORT AND IT IS ENVISIONED THAT IT MAY BE IMPLEMENTED WITH MINOR MODIFICATIONS AND WILL THEREBY RESULT IN A SUBSTANTIAL GAIN TO THE DEPARTMENT, THE STATE GOVERNMENT, AND THE CITIZENS OF THE STATE OF SOUTH DAKOTA. THE IMPLEMENTATION OF THIS PLAN SHOULD BRING ABOUT A MEASURABLE INCREASE IN PUBLIC INVOLVEMENT AND PUBLIC SUPPORT OF THE DEPARTMENT'S ENVIRONMENTAL PROGRAMS.
TITLE	ESSAYS ON ISSUES RELEVANT TO THE REGULATION OF RADIOACTIVE WASTE MANAGEMENT.
AUTHOR	BISHOP, W. P.; HOOS, I. R.; HILBERRY, N.; METLAY, D. S.; WATSON, R. A.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	REGULATIONS; TECHNOLOGY; RADIOACTIVE WASTES; MANAGEMENT PLANNING; GOALS; ASSESSMENTS; METHODOLOGY; ERROR ANALYSIS; PUBLIC RELATIONS.
DESC NOTE	100P
ABSTRACT	THIS DOCUMENT CONTAINS A COLLECTION OF ESSAYS PREPARED BY THE INDIVIDUALS WHO PARTICIPATED IN A SPECIAL TASK GROUP FOR THE U.S. NUCLEAR REGULATORY COMMISSION (NRC) FOR THE PURPOSE OF IDENTIFYING AND PROPOSING GOALS (OR GUIDING PRINCIPLES) FOR THE REGULATION OF RADIOACTIVE WASTE MANAGEMENT. THE REPORT OF THE SPECIAL TASK GROUP TO THE NRC IS CONTAINED IN "PROPOSED GOALS FOR RADIOACTIVE WASTE MANAGEMENT." THE TITLES OF THE ESSAYS ARE AS FOLLOWS: HISTORY AND INTERPRETATION OF RADIOACTIVE WASTE MANAGEMENT IN THE UNITED STATES; THE CREDIBILITY ISSUE; ASSESSMENT OF METHODOLOGIES FOR RADIOACTIVE WASTE MANAGEMENT; REMARKS ON MANAGERIAL ERRORS AND PUBLIC PARTICIPATION; OBSERVATIONS AND IMPRESSIONS ON THE NATURE OF RADIOACTIVE WASTE MANAGEMENT PROBLEMS; AND GOALS FOR NUCLEAR WASTE MANAGEMENT.

TITLE AN EVALUATION OF PUBLIC HEARINGS ON WATER DEVELOPMENT PROJECTS IN MISSISSIPPI.
AUTHOR HAMPE, GARY D.
PUB DATE 76
AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC WATER RESOURCES; PUBLIC OPINION; RESEARCH PROJECTS; MEETINGS; SOCIAL EFFECTS; ECONOMIC DEVELOPMENT; CIVIL ENGINEERING; VALUES; SOCIOECONOMIC STATUS; DECISION-MAKING; SOCIAL CHANGES; MISSISSIPPI.
DECS NOTE 87P
ABSTRACT RESEARCH FINDINGS FROM THREE MODES OF INVESTIGATION RELATING TO PUBLIC PARTICIPATION IN PUBLIC MEETINGS HELD BY THE CORPS OF ENGINEERS DURING THE PERIOD 1962-1975 SHOWED SIMILAR RESULTS. MOST PARTICIPANTS SUPPORTED THE PROJECTS PROPOSED BY THE CORPS. PARTICIPANTS WERE ON THE AVERAGE OF A HIGHER SOCIAL CLASS THAN THE GENERAL POPULATION. THE MAIN CONCLUSION TO BE DRAWN FROM THIS RESEARCH WAS THAT THE CORPS HAS RESPONDED TO ITS PUBLIC IN THE PAST AND CONTINUES TO DO SO AT PRESENT. YOUNGER PARTICIPANTS IN THE PUBLIC HEARING PROCESS ARE BEGINNING TO BRING INTO FOCUS MORE OPPOSITION THAN HAS EXISTED IN THE PAST. THE PUBLIC TO WHICH THE CORPS HAS RESPONDED AND CONTINUES TO RESPOND CONSISTS OF THE LEADING MEMBERS OF THE BUSINESS AND POLITICAL COMMUNITIES. PORTIONS OF THIS DOCUMENT ARE NOT FULLY LEGIBLE.

TITLE GOBBLEDYGOOK HAS GOT TO GO.
AUTHOR O'HAYNE, JOHN.
PUB DATE 75
AVAIL SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC.
DESC NOTE 112P CATALOG NO. 153.2:G53, $1.20.
ABSTRACT DIRECTED TO THE GOVERNMENT EMPLOYEE THIS BOOK OFFERS SUGGESTIONS (WITH EXAMPLES) FOR IMPROVING WRITTEN COMMUNICATION. WHILE PRIMARILY DIRECTED TO "IN-HOUSE" COMMUNICATION, THE CONCLUDING TWO CHAPTERS DEAL WITH PRESS RELEASES AND NEWS RELEASE WRITING.

TITLE GUIDE 1: EFFECTIVE PUBLIC MEETINGS.
AUTHOR RAGAN, JAMES F.
PUB DATE 77
AVAIL OFFICE OF PUBLIC AFFAIRS, U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC.

ABSTRACT	A GOOD SHORT SUMMARY OF VARIOUS ASPECTS OF DESIGNING AND CONDUCTING EFFECTIVE PUBLIC MEETINGS.

TITLE	GUIDE 2: WORKING EFFECTIVELY WITH ADVISORY COMMITTEES.
AUTHOR	WIDDITSCH, ANN.
PUB DATE	77
AVAIL	U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC.
AVAIL	A VERY GOOD SHORT GUIDE ON WORKING WITH ADVISORY COMMITTEEES.

TITLE	GUIDE 3: EFFECTIVE USE OF MEDIA.
AUTHOR	ENVIRONMENTAL PROTECTION AGENCY.
PUB DATE	77
AVAIL	U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC.
ABSTRACT	A GOOD SHORT REVIEW OF TECHNIQUE FOR WORKING WITH THE MEDIA.

TITLE	IDENTIFYING AND MEETING TRAINING NEEDS FOR PUBLIC PARTICPATION RESPONSIBILITIES IN WATER RESOURCES PLANNING.
AUTHOR	ERTEL, MADGE O.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CITIZEN PARTICIPATION; WATER RESOURCES; PROJECT PLANNING; SOCIAL EFFECT; EDUCATION; POLITICAL OBJECTIVES: UNIVERSITIES; COASTAL ZONE MANAGEMENT; SURVEYS; COMMUNICATION.
DESC NOTE	43P
ABSTRACT	LEGISLATIVE MANDATES ARE INCEASINGLY ASSIGNING TO WATER RESOURCES PLANNING AGENCIES THE RESPONSIBILITY FOR CONDUCTING PUBLIC PARTICIPATION PROGRAMS. FEW PLANNING PROGRAMS, HOWEVER, HAVE THE RESOURCES TO EMPLOY PROFESSIONALS WITH SPECIALIZED TRAINING IN THE TYPES OF SKILLS THAT ARE CRUCIAL TO SUCCESSFUL PUBLIC PARTICIPATION PROGRAMMING, AND PLANNERS THEMSELVES ARE OFTEN REQUIRED TO PERFORM THIS FUNCTION IN ADDITION TO OTHER DUTIES. THIS PROJECT HAS DOCUMENTED THE EXTENT OF THIS SITUATION THROUGH A SURVEY OF PLANNERS IN COASTAL ZONE MANAGEMENT AND '208' PROGRAMS IN NEW ENGLAND.

TITLE	ILLINOIS COASTAL ZONE MANAGEMNT PROGRAM, THIRD YEAR WORK PRODUCT, PUBLIC PARTICIPATION IN THE ILLINOIS COASTAL ZONE MANAGEMENT PROGRAM DEVELOPMENT.
AUTHOR	STRANG, MARY LEE.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CITIZEN PARTICIPATION; COASTAL ZONE MANAGEMENT; LAKE MICHIGAN; SCHEDULING; PUBLIC OPINION; MEETINGS; ORGANIZATIONS; PUBLICITY; PAPERS; SHORE PROTECTION; COAST; QUESTIONNAIRES; ILLINOIS.
DESC NOTE	131P
ABSTRACT	THIS REPORT IS AN EXECUTIVE SUMMARY OF THE PUBLIC PARTICIPATION ACTIVITIES DURING THE THIRD YEAR PLANNING PERIOD BY THE LAKE MICHIGAN INTER-LEAGUE GROUP FOR THE ILLINOIS COASTAL ZONE MANAGEMENT PROGRAM. INCLUDED ARE THE SCHEDULING, PURPOSES, AND FORMAT OF THE ELEVEN PUBLIC MEETINGS HELD BY LOCAL LEAGUES, AS WELL AS A LISTING AND ANALYSIS OF THE QUESTIONS ASKED AT EACH OF THE PUBLIC MEETINGS. DISPLAY BOARDS CONTAINING FOLDERS ABOUT THE ILLINOIS COASTAL ZONE MANAGEMENT PROGRAM DEVELOPMENT WERE PLACED AT TWENTY LIBRARIES. VARIOUS SUPPORTIVE ACTIVITIES WERE UNDERTAKEN BY THE LEAGUES, INCLUDING A PRELIMINARY ORGANIZATION MEETING, CONTACTING LOCAL NEWSPAPER OFFICES WITH PUBLICITY ABOUT THE PUBLIC MEETINGS, DISTRIBUTION OF OVER 1000 POSTERS THROUGHOUT LOCAL COMMINITIES, AND LOCAL LEAGUE DISTRIBUTION OF THE 'LAKE MICHIGAN CURRENT'. (PORTIONS OF THIS DOCUMENT ARE NOT FULLY LEGIBLE).

TITLE	ILLINOIS COASTAL ZONE MANAGEMENT PROGRAM. YEAR WORK PRODUCT (2ND), VOLUME VI, PUBLIC PARTICIPATION ACTIVITIES BY LEAGUE OF WOMEN VOTERS, NORTHEASTERN ILLINOIS PLANNING COMMISSION, LAKE MICHIGAN FEDERATION.
PUB DATE	76
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	PROJECT PLANNING; CITIZEN PARTICIPATION; COASTAL ZONE MANAGEMENT; ILLINOIS; PUBLIC OPINION; RECOMMENDATIONS; EDUCATION; LAKE MICHIGAN; ILLINOIS COASTAL ZONE MANAGEMENT PROGRAM.
DESC NOTE	106P

ABSTRACT	THE STATE OF ILLINOIS COASTAL ZONE MANAGEMENT PROGRAM HAS, SINCE THE PROGRAM'S INCEPTION, BEEN STRONGLY COMMITTED TO THE DEVELOPMENT OF A PROGRAM WHICH IS REFLECTIVE OF, AND RESPONSIVE TO THE NEEDS AND CONCERNS OF THE CITIZENS OF NORTHEASTERN ILLINOIS. THIS REPORT IS A COMPILATION OF SECOND YEAR CITIZEN PARTICIPATION ACTIVITIES AND THE SUBSEQUENT INFLUENCE ON THE PROGRAM'S DEVELOPMENT. THIS REPORT PROVIDES A DETAILED LOOK AT THE METHODOLOGY INVOLVED IN CARRYING OUT PUBLIC PARTICIPATION ACTIVITIES.

TITLE	IMPLICATION OF NSF ASSISTANCE TO NONPROFIT CITIZEN ORGANIZATIONS.
AUTHOR	BOASBERG, TERSH.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	FEDERAL ASSISTANCE PROGRAMS; GOVERNMENT POLICIES; ORGANIZATIONS; CITIZEN PARTICIPATION; DECISION-MAKING; RESEARCH; TECHNOLOGY; MANAGEMENT METHODS; GRANTS.
DESC NOTE	364P
ABSTRACT	THIS STUDY EXAMINES THE POLICY IMPLICATIONS OF POSSIBLE NATIONAL SCIENCE FOUNDATION GRANTS UNDER THE NSF SCIENCE FOR CITIZENS PROGRAM TO NON-PROFIT CITIZEN ORGANIZATIONS WHICH SEEK TO PARTICIPATE MORE FULLY IN GOVERNMENTAL DECISION MAKING WITH RESPECT TO ISSUES INVOLVING SCIENCE AND TECHNOLOGY. THE STUDY DESCRIBES THE AMERICAN EXPERIENCE WITH CITIZEN INVOLVEMENT, PUBLIC PARTICIPATION IN TWO EUROPEAN COUNTRIES, CURRENT MODELS OF FEDERAL AND STATE SUPPORT FOR CITIZEN PARTICIPATION IN GOVERNMENTAL PROCESSES, THE DIVERSITY OF CITIZEN ORGANIZATIONS, AND THE VARIOUS POINTS IN THE GOVERNMENTAL PROCESS AT WHICH NON-PROFIT GROUPS SEEK TO INFLUENCE DECISION MAKING. THE STUDY DISCUSSES SOME OF THE ADMINISTRATIVE PROBLEMS INVOLVED.

TITLE	IMPROVING REGULATORY EFFECTIVENESS IN FEDERAL/STATE SITING ACTIONS, NUCLEAR POWER PLANT LICENSING: A NEW ENGLAND PERSPECTIVE.
AUTHOR	CLARK, PETER B.; NEELY, JOHN H.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	NUCLEAR POWER PLANTS; LICENSES; GOVERNMENT POLICIES; NEW ENGLAND; SITE SURVEYS; REGIONAL

	PLANNING; DECISION-MAKING.
DESC NOTE	83P
ABSTRACT	THIS STUDY EVALUATES THE NUCLEAR POWER PLANT SITING LICENSING PROCESS FROM THE NEW ENGLAND PERSPECIVE BECAUSE THE STUDY TEAM WANTED TO CONSIDER WHETHER SOME PARTS OF THE LICENSING PROCESS SHOULD BE CONDUCTED ON MULTI-STATE BASIS. THE REPORT RECOMMENDS: (1) THE ESTABLISHMENT OF A LEAD AGENCY TO COORDINATE RULE MAKING, POLICY REVIEW, AND LICENSING BY FEDERAL, STATE AND LOCAL GOVERNMENTS; (2) SITE REVIEW BE CONNECTED SEPARATELY FROM THE REST OF THE LICENSING PROCESS AND THAT IT BE CONCLUDED BEFORE PLANT FABRICATION; (3) THE NEED FOR POWER BE DETERMINED EARLY AND BASED ON A GENERIC REVIEW OF REGIONAL DEMANDS AND SUPPLY GROWTH; (4) ISSUES HANDLED GENERICALLY OR IN THE PROPOSED EARLIER LICENSING PROCEEDINGS BE EXCLUDED FROM CONSIDERATION DURING GP AND OL PROCEEDINGS; (5) PUBLIC PARTICIPATION BE INPROVED, MOST PARTICULARLY BY THE PROVISION OF FINANCIAL ASSISTANCE TO PARTICIPANTS AND INTERVENERS; AND (6) FEDERAL LEGISLATION SHOULD BE PASSED TO IMPLEMENT THE RECOMMENDATIONS, BUT THAT SOME CHANGES CAN BE MADE NOW, UNDER EXISTING LAW.
TITLE	IMPROVING REGULATORY EFFECTIVENESS IN FEDERAL/STATE SITING ACTIONS: STATE PERSPECTIVES ON ENERGY FACILITY SITING.
AUTHOR	STEVENS, DAVID W.; HELMINSKI, EDWARD L.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	NUCLEAR POWER PLANTS; SITE SURVEYS; MEETINGS; GEORGIA; ILLINOIS; STATE GOVERNMENT; NATIONAL GOVERNMENT; REGULATIONS; POLICIES: FINANCING: PLANNING; ENVIRONMENTAL SURVEYS; CITIZEN PARTICIPATION; MANAGEMENT; LEGISLATION.
DESC NOTE	80P
ABSTRACT	THROUGH JOINT EFFORTS OF THE NATIONAL GOVERNORS' ASSOCIATION AND THE NUCLEAR REGULATORY COMMISSION TWO NATIONAL WORKSHOPS WERE HELD IN ATLANTA, DECEMBER 1976, AND IN CHICAGO, APRIL 1977. THE WORKSHOPS WERE DESIGNED TO PROVIDE AN OPPORTUNITY FOR STATE REPRESENTATIVES TO DISCUSS WITH FEDERAL OFFICIALS AND REPRESENTATIVES FROM PRIVATE UTILITIES AND ENVIRONMENTAL INTEREST GROUPS BASIC PROBLEM AREAS IN NUCLEAR POWER STATION SITING PROCEDURES AND POTENTIAL SOLUTIONS. THIS STUDY IS A COMPOSITE OF VIEWS EXPRESSED BY STATES

PARTICIPATING IN THESE WORKSHOPS AND IN OTHER NGA SPONSORED MEETINGS. IT ALSO IS A CRITIQUE OF THE NRC PRELIMINARY STAFF REPORT. ALTHOUGH THE NGA HAS NOT ENDORSED ALL OF THE VIEWS AND POSITIONS SET FORTH IN THIS REPORT, IT DOES BELIEVE THAT THE REPORTS' CONCLUSIONS PRESENT MANY OF THE CONCERNS OF THE STATES, SUCH AS THE DESIRABILITY AND THE PRACTICABILITY OF STRONGER STATE PARTICIPATION AND RESPONSIBILITY IN THE SITING PROCESS. POLICY ISSUES DISCUSSED INCLUDE FINANCING THE SITING PROCESS, ENERGY FACILITY PLANNING NEEDS, NEED FOR POWER DETERMINATIONS, EARLY SITE REVIEW PROGRAMS, ENVIRONMENTAL REVIEWS REDUCING THE REDUNDANCIES, ENHANCING PUBLIC PARTICIPATION, IMPROVING STATE SITE MANAGEMENT PROGRAMS, INTEGRATION OF FEDERAL SITE MANAGEMENT ACTIVITIES, AND CLEAN AIR LEGISLATION-IMPACTS OF FACILITY SITING. ALSO DISCUSSED ARE PROPOSED FEDERAL LEGISLATION AND MULTI-STATE ISSUES.

TITLE	IMPROVING THE EFFECTIVENESS OF PUBLIC MEETINGS HEARINGS.
AUTHOR	NEUHAUS, HELEN; AND MATHEWS, WILLIAM.
PUB DATE	78
AVAIL	FEDERAL HIGHWAY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION.
ABSTRACT	A VERY COMPLETE AND DETAILED GUIDEBOOK ON CONDUCTING PUBLIC MEETINGS.

TITLE	INFORM AND INVOLVE HANDBOOK.
AUTHOR	FOREST SERVICE.
PUB DATE	77
AVAIL	FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.
ABSTRACT	A GENERAL MANUAL ON PUBLIC INVOLVEMENT, INCLUDING A DISCUSSION OF A VARIETY OF PUBLIC INVOLVEMENT TECHNIQUES.

TITLE	INNOVATIVE ZONING: A LOCAL OFFICIAL'S GUIDEBOOK.
AUTHOR	STOLOFF, DAVID.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	ZONING, URBAN PLANNING, LAND-USE-ZONING, LOCAL GOVERNMENT, HOUSING-PLANNING, TAXES, RESIDENTIAL BUILDINGS, COMMERCIAL BUILDINGS.
DESC NOTE	28P
ABSTRACT	THIS GUIDEBOOK FOR LOCAL OFFICIALS ANSWERS QUESTIONS ON THE USES AND ADVANTAGES OF INNOVATIVE ZONING, DISCUSSES THREE CURRENT INNOVATIVE

TECHNIQUES, AND OFFERS SUGGESTIONS FOR GETTING INNOVATIVE ZONING ADOPTED AND MAKING IT WORK. TOPICS ON NEGOTIATING WITH DEVELOPERS, DRAFTING A GOALS STATEMENT, AND OBTAINING ADDITIONAL INFORMATION ARE ALSO DISCUSSED. INNOVATIVE ZONING OFFERS MORE POSITIVE DIRECTION TO LANDOWNERS, INCREASED FLEXIBILITY, AND GREATER PUBLIC PARTICIPATION. FURTHER, INNOVATIVE ZONING PRACTICES CAN COMBINE WITH TRADITIONAL ONES. AN EXAMPLE IS ADDING ALTERNATIVE LOT - SIZE PROVISIONS TO STANDARD LAND - USE REGULATIONS TO PERMIT CLUSTERED HOUSING. PLANNED UNIT DEVELOPMENT CAN MAKE POSSIBLE LARGER AREAS OF COMMON OPEN LAND, HIGHER - DENSITY HOUSING THAT REDUCES DEVELOPMENT COSTS PER UNIT, MORE FLEXIBLE DEVELOPMENT, A HIGHER PER CAPITA TAX BASE, VARIED - INCOME HOUSING, AND A RECORDED DEVELOPMENT PLAN. INCENTIVE ZONING PERMITS CONCESSIONS TO DEVELOPERS — INCREASED HEIGHT OR DENSITY — IN RETURN FOR SPECIFIC COMMUNITY IMPROVEMENTS. IMPACT ZONING PERMITS COMPARISON OF A COMMUNITY'S CAPACITY WITH ESTIMATED DEMANDS, SO THAT ENVIRONMENTAL IMPACT IS CONSIDERED BEFORE CONSTRUCTION. INFORMATION ON OBTAINING A COMPANION VOLUME, THE INNOVATIVE ZONING DIGEST IS PROVIDED.

TITLE	INSTITUTIONAL ASPECTS OF WASTEWATER MANAGEMENT: THE BOSTON CASE STUDY.
AUTHOR	HUDSON, JAMES E.; WEINSTEIN, SARAH; DEESE, PATRICIA S.; COLLINS, BERT; MADSEN, CAROL.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	SEWAGE TREATMENT, MUNICIPALITIES, WATER POLLUTION ABATEMENT, CONSTRUCTION, GRANTS, PROJECT PLANNING, FINANCING, POLITICAL OBJECTIVES, MAINTENANCE, GOVERNMENT POLICIES, EXPENSES, STANDARDS, CITIZEN PARTICIPATION, LOCAL GOVERNMENT, WASTEWATER, REGIONAL PLANNING, DESIGN, LAW ENFORCEMENT, ENVIRONMENTAL IMPACTS, MASSACHUSETTS.
DESC NOTE	367P
ABSTRACT	THE OBJECTIVE OF THE STUDY WAS TO EXAMINE RECENT OPERATION OF EPA'S CONSTRUCTION GRANTS PROGRAM, USING THE BOSTON METROPOLITAN AREA AS A CASE STUDY, WITH A VIEW TOWARD DEVELOPING RECOMMENDATIONS FOR POSSIBLE ACTIONS AT THE NATIONAL LEVEL. THIS REPORT ANALYZES THE PLANNING

AND INSTITUTIONAL ASPECTS OF WASTEWATER MANAGEMENT IN THE BOSTON METROPOLITAN AREA. THIS REPORT ADDRESSES INSTITUTIONAL AND POLITICAL ASPECTS OF THE WATER POLLUTION CONTROL PROGRAM: (1) FINANCING OF THE LOCAL PORTIONS OF SYSTEM COSTS; (2) POLICY GUIDANCE ISSUED BY THE FEDERAL GOVERNMENT; (3) COORDINATION AMONG PROGRAM OPERATIONS; (4) MANAGEMENT AND MAINTENANCE OF PROGRAMS AND FACILITIES; AND (5) PUBLIC PARTICIPATION IN THE PLANNING PROCESSES. THERE ARE TWO TYPES OF RECOMMENDATIONS: (1) THOSE WHICH INCREASE THE CONSIDERATIONS OF COMPREHENSIVE PLANNING ISSUES, AND (2) THOSE WHICH INCREASE LOCAL FLEXIBILITY IN THE IMPLEMENTATION OF FACILITIES AND CONTROLS.

TITLE	INSTITUTIONAL CONSTRAINTS AND OPPORTUNITIES. STUDY MODULE V. REPORT ON TASKS 4, 5, 6, and 7.
AUTHOR	BALMER, DONALD G.; MATTERSDORT, G. H.; KELLY, KEVIN R.; FOOTE, JEFFREY H.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	ENERGY POLICY, REGIONAL PLANNING; GOVERNMENT POLICIES. ENERGY SOURCES; RATES; COSTS; SITE SURVEYS; PLANNING; CITIZEN PARTICIPATION; DECISION-MAKING; ELECTRIC UTILITIES; NATURAL GAS; NUCLEAR ENERGY; GEOTHERMAL RESOURCES; SOLAR ENERGY; BIOMASS PLANTATIONS; OREGON; IDAHO; BIOLOGICAL ENERGY CONVERSION; WIND POWER; REGULATIONS; LEGISLATION; NATIONAL GOVERNMENT; STATE GOVERNMENT; CONSTRAINTS; WASHINGTON STATE.
DESC NOTE	307P
ABSTRACT	THIS REPORT DISCUSSES (1) PUBLIC PARTICIPATION IN ENERGY DECISION-MAKING, (2) ENERGY RATE MAKING, (3) ENERGY FACILITY SITING, AND (4) UNCONVENTIONAL ENERGY SOURCES AS INSTITUTIONAL POLICY LEVERS FROM THE STANDPOINT OF REGIONAL AND STATE CONSIDERATIONS IN OREGON, WASHINGTON, AND IDAHO.

TITLE	IOWA STATE-WIDE WATER QUALITY MANAGEMENT PLAN.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161
DESC	WATER QUALITY MANAGEMENT; ASSESSMENTS; SOIL CONSERVATION; EROSION; LOCAL GOVERNMENT; PLANNING; STATE GOVERNMENT; NATIONAL GOVERNMENT; CITIZEN PARTICIPATION; IOWA.
DESC NOTE	221P

ABSTRACT	IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 208 OF THE FEDERAL WATER POLLUTION CONTROL ACT OF 1972, IOWA HAS COMPLETED A STATE-WIDE WATER QUALITY MANAGEMENT PLAN. THE PLAN ASSESSES THE CURRENT SURFACE WATER QUALITY IN IOWA IN TERMS OF POINT AND NONPOINT SOURCE POLLUTION, IDENTIFIES EXISTING IOWA DEPARTMENT OF ENVIRONMENTAL QUALITY AND IOWA DEPARTMENT OF SOIL CONSERVATION PROGRAMS DEALING WITH THESE POLLUTION SOURCES, DISCUSSES FEDERAL, STATE, COUNTY AND LOCAL MANAGEMENT AGENCIES INVOLVED IN SOME WAY WITH WATER QUALITY ACTIVITIES, AND IDENTIFIES THE PLANNING ACTIVITIES AND PUBLIC PARTICIPATION INVOLVED IN DEVELOPING THE FINAL PLAN. THE PLAN INCLUDES A FIVE-YEAR STRATEGY, WHICH WILL BE USED FOR IMPLEMENTING STATE-WIDE WATER POLLUTION CONTROL PROGRAM ACTIVITIES.
TITLE	A LAND USE DECISION METHODOLOGY FOR ENVIRONMENTAL CONTROL.
AUTHOR	WICKERSHAM, KIRK; HANSEN, ROGER P.; MELCHER, ALBERT G.
PUB DATE	75
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	LAND USE; LOCAL GOVERNMENT; MANAGEMENT PLANNING; ENVIRONMENT ISSUES; ECOLOGY; PUBLIC OPINION; COMMUNITY DEVELOPMENT; CITIZEN PARTICIPATION; WATER RESOURCES; ZONING; REGULATIONS; ENVIRONMENTAL ASPECTS.
DESC NOTE	188P
ABSTRACT	THE REPORT PROPOSES AN ECOLOGICALLY RESPONSIBLE LAND USE DECISION-MAKING SYSTEM FOR LOCAL, REGIONAL AND, TO AN EXTENT, STATE GOVERNMENTS. REFERRED TO AS LUDMS, IT IS BASED ON CONCLUSIONS THAT LOCAL GOVERNMENTS HAVE NOT DEALT EFFECTIVELY WITH LAND USE PROBLEMS BECAUSE TRADITIONAL PLANNING AND LAND USE CONTROL DEVICES ARE UNECOLOGICAL, UNRESPONSIVE AND UNSYSTEMATIC. THE FUNDAMENTAL PREMISE OF LUDMS IS THAT ENVIRONMENTALLY RESPONSIBLE LAND USE PLANNING AND CONTROL MUST BE BASED ON VALID ECOLOGICAL INFORMATION COMBINED WITH ENLIGHTENED AND INFORMED PUBLIC OPINION. LUDMS MAKES USE OF SEVERAL BASIC CONCEPTS, INCLUDING POLICY PLANNING (A PROCESS FOR COMBINING PUBLIC OPINION WITH SCIENTIFIC AND TECHNICAL INFORMATION TO CREATE COMMUNITY

POLICIES), USE OF AN INTERDISCIPLINARY TEAM, PUBLIC PARTICIPATION, AN ENVIRONMENTAL RESOURCES INVENTORY AND ANALYSIS, A STAFF WHICH UNDERSTANDS AND CAN COMMUNICATE ABOUT ECOLOGY, LEGAL DEVICES FOR LAND USE CONTROL, AND POSITIVE COMMUNITY PROGRAMS. 'MODEL' STATE AND LOCAL CODES FOR IMPLEMENTING LUDMS ARE PROVIDED.

TITLE	LISTENING TO THE METROPOLIS. AN EVALUATION OF THE NEW YORK REGION'S CHOICES FOR '76 MASS MEDIA TOWN MEETING AND HANDBOOK ON PUBLIC PARTICIPATION IN REGIONAL PLANNING.
AUTHOR	SHORE, WILLIAM B.; ANDERSON, RICHARD T.; MCMANUS, MICHAEL J.; GOLDBECK, WILLIS; HACK, PEARL H.
PUB DATE	74
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	URBAN PLANNING, PARTICIPATIVE MANAGEMENT; NEW YORK; MASS MEDIA; TELEVISION SYSTEMS; NEWSPRINT; MEETINGS; PROJECTS; EVALUATION; URBAN AREAS; DECISION-MAKING.
DESC NOTE	98P
ABSTRACT	CHOICES FOR '76 WAS A MASS MEDIA TOWN MEETING SERIES IN WHICH ALL THE NEW YORK URBAN REGION'S TELEVISION STATIONS PRESENTED FIVE ONE-HOUR PROGRAMS ON PLANNING ISSUES: SOME 600,000 HOUSEHOLDS (ON THE AVERAGE) WATCHED EACH SHOW, 26,500 PERSONS SUBMITTED A BALLOT ON THE ISSUES AFTER EACH TOWN MEETING (ON THE AVERAGE), MORE THAN 20,000 PERSONS TOOK PART IN AT LEAST ONE DISCUSSION GROUP AFTER WATCHING THE FILM, AND ABOUT 100,000 BACKGROUND BOOKS WERE DISTRIBUTED. THIS BOOK EVALUATES THE PROJECT ALONGSIDE SEVERAL GOALS AND DISCUSSES WHAT THE GOALS SHOULD BE. IT PROVIDES A ROAD MAP FOR THOSE CONSIDERING SUCH A PROJECT WITH HOW-TO-DO-IT ADVICE.

TITLE	A MANUAL FOR ACHIEVING EFFECTIVE COMMUNITY PARTICIPATION IN TRANSPORTATION PLANNING.
AUTHOR	VELAND AND JUNKER, ET AL.
PUB DATE	74
AVAIL	PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, PHILADELPHIA, PENNSYLVANIA.
ABSTRACT	A GENERAL MANUAL DESCRIBING THE DESIGN OF COMMUNITY PARTICIPATION PROGRAMS, INCLUDING A GOOD DESCRIPTION OF TECHNIQUES.

TITLE	MASSACHUSETTS COASTAL ZONE MANAGEMENT, INFORMATION/EDUCATION.
PUB DATE	76
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	COASTAL ZONE MANAGEMENT; MASSACHUSETTS; CITIZEN PARTICIPATION; EDUCATION; PROJECT PLANNING; DECISION-MAKING; GOVERNMENT POLICIES; LAW JURISPRUDENCE; CONTINENTAL SHELVES; ORGANIZATIONS; PUBLICITY; MASS MEDIA.
DESC NOTE	30P
ABSTRACT	PUBLIC PARTICIPATION, AS IT DEVELOPED IN MASSACHUSETTS, WAS A PART OF THE PLANNING PROCESS FOR COASTAL ZONE MANAGEMENT. PLANNING DECISIONS, PLANNING CONCEPTS AND CHOOSING AMONG MANAGEMENT ALTERNATIVES WERE ALL PUBLIC ACTIVITIES. THE GOAL WAS TO IMPROVE THE PLAN BY MAKING PROGRAM DEVELOPMENT A PUBLIC PROCESS. CITIZENS AND OFFICIALS THROUGHOUT MASSACHUSETTS WERE ASKED TO LEND THEIR EXPERIENCE, KNOWLEDGE, AND CONCERN TO MASSACHUSETTS. THE REPORT DESCRIBES THE ACTIVITIES RELATED TO THE PLANNING PROCESS FOR THE COASTAL ZONE.

TITLE	MAUMEE RIVER BASIN WATER AND RELATED LAND RESOURCES REPORT - A LEVEL B STUDY.
AUTHOR	JARECKI, EUGENE A.; BRALEY, SUZANNE.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	RIVER BASIN DEVELOPMENT; LAND USE; REGIONAL PLANNING; MAUMEE RIVER BASIN; RESEARCH PROJECTS; PROJECT PLANNING; EROSION CONTROL; RECREATION; SOIL CONSERVATION; FLOOD CONTROL; URBAN AREAS; WATER SUPPLY; RURAL AREAS; ENVIRONMENTAL IMPACTS; WILDLIFE; WATER QUALITY MANAGEMENT; MICHIGAN; INDIANA; OHIO.
DESC NOTE	123P
ABSTRACT	A DETAILED COMPREHENSIVE LONG-RANGE PLAN WAS DEVELOPED FOR SOLVING WATER AND RELATED LAND RESOURCES PROBLEMS IN THE MAUMEE RIVER BASIN OF INDIANA, MICHIGAN, AND OHIO, AND IN THE MAUMEE RIVER BASIN OF INDIANA, MICHIGAN, AND OHIO, AND IN THE MAUMEE BAY OF LAKE ERIE. THE FOCUS OF THIS LEVEL B STUDY WAS ON THE EROSION AND SEDIMENTATION PROBLEMS IN THE BASIN AND BAY. THE LEVEL B PLAN, PREPARED THROUGH EXTENSIVE PUBLIC PARTICIPATION AND A TEAM OF FEDERAL, STATE, REGIONAL AND LOCAL OFFICIALS UNDER THE CENTRALIZED DIRECTION OF THE

GREAT LAKES BASIN COMMISSION, IDENTIFIES FUTURE ACTIONS TO BE UNDERTAKEN BY ALL LEVELS OF GOVERNMENT AND THE BASIN RESIDENTS. ACTION PROGRAMS, INCLUDING FEDERAL AND FEDERALLY ASSISTED PROGRAMS ARE DESCRIBED. DESCRIPTIONS INCLUDE PUBLIC PRIORITIES FOR IMPLEMENTATION AND ESTIMATED COSTS. THE ENVIRONMENTAL IMPACTS OF THE PLAN'S COMPONENTS ARE ANALYZED. THE BASIN, THE ISSUES, AND THE ALTERNATIVE PLANS CONSIDERED ARE DISCUSSED.

TITLE	NATIONAL WILDLIFE FEDERATION INTERIM SURVEY OR EPA 201 WASTEWATER TREATMENT FACILITY GRANT PROGRAM DOCUMENTS: LAND USE IMPACTS, NEPA COMPLIANCE, AND PUBLIC PARTICIPATION. (JANUARY 1 - MARCH 31, 1976).
AUTHOR	LISHMAN, JOHN M.; BICK, THOMAS K.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	GRANTS; RESEARCH PROJECTS; SEWAGE TREATMENT; RESEARCH MANAGEMENT; PERFORMANCE EVALUATION; LAND USE; ENVIRONMENTAL IMPACTS; LAW JURISPRUDENCE; CITIZEN PARTICIPATION; FISHES; WILDLIFE; REGULATIONS; APPRAISALS; REGIONAL PLANNING; FLOOD PLAINS; STREAM FLOW; CONSTRAINTS; WATER QUALITY; SEWAGE DISPOSAL; TABLES DATA.
DESC NOTE	244P
ABSTRACT	A FOUR-PART ANALYSIS WAS MADE OF EPA PERFORMANCE, REGION BY REGION, RE LAND USE IMPACTS, COMPLIANCE WITH LEGAL REQUIREMENTS, AND PUBLIC PARTICIPATION IN THE 201 WASTEWATER TREATMENT FACILITY GRANTS PROGRAM. (PORTIONS OF THIS DOCUMENT ARE NOT FULLY LEGIBLE).

TITLE	A NEW CITIZEN'S GUIDE TO CLEAN WATER.
AUTHOR	IZAAK WALTON LEAGUE.
PUB DATE	79
AVAIL	COPIES AVAILABLE FROM THE PUBLIC INFORMATION CENTER (PM-215), U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, D.C. 20460.
ABSTRACT	THIS GUIDE COVERS ALL OF THE CLEAN WATER ACT PROGRAMS.

TITLE	NEW YORK STATE COASTAL ZONE MANAGEMENT PROGRAM: PUBLIC PARTICIPATION AND PUBLIC INFORMATION.
PUB DATE	75
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC	COASTAL ZONE MANAGEMENT; NEW YORK; PROJECT PLANNING; REQUIREMENTS; MEETINGS; DECISION-MAKING; STATE GOVERNMENT; ORGANIZATIONS.
DESC NOTE	22P
ABSTRACT	THE REPORT CONTAINS PROGRAM REQUIREMENTS, DEFINITION, METHODS, AND IMPLEMENTATION GUIDELINES FOR THE PUBLIC PARTICIPATION AND INFORMATION ELEMENT OF THE PROGRAM DEVELOPMENT PHASE OF NEW YORK INFORMATION ELEMENT OF THE PROGRAM DEVELOPMENT PHASE OF NEW YORK STATE'S COASTAL ZONE MANAGEMENT PROGRAM. THE PURPOSE IS TO PROVIDE DIRECTION CONCERNING PUBLIC PARTICIPATION AND INFORMATION TO ALL THOSE PARTIES INTERESTED IN THE STATE'S CSM PROGRAM.

TITLE	OCS DEVELOPMENT IN COASTAL LOUSIANA: A SOCIO-ECONOMIC IMPACT ASSESSMENT.
AUTHOR	MUMPHREY, ANTHONY J., JR.; THAYER, RALPH E.; WAGNER, FREDERICK W.; WILDGEN, JOHN K.; YOUNG, ALMA H.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161
DESC	NATURAL GAS; CRUDE OIL; ECONOMIC DEVELOPMENT; COASTS; LOUISIANA; SOCIAL EFFECT; PRODUCTION; EMPLOYMENT; POPULATIONS; EXPENSES; PUBLIC UTILITIES; RECOMMENDATIONS; CITIZEN PARTICIPATION; HIGHWAYS; ECONOMIC IMPACTS; RECREATION; FINANCING; INVESTMENTS; CONSTRUCTION COSTS; MAINTENANCE; SUBSIDENCE.
DESC NOTE	284P
ABSTRACT	IN THE SEVEN CHAPTERS WHICH COMPRISE THIS STUDY, VARIOUS IMPACTS OF OUTERCONTINENTAL SHELF (OCS) OIL AND GAS DEVELOPMENT ON THE LOUISIANA COASTAL ZONE AND RELATED TOPICS ARE DISCUSSED. CHAPTER 2 DEALS WITH THE OCS RELATED PRODUCTION, EMPLOYMENT, AND POPULATION IMPACTS. THE PUBLIC SERVICE SECTORS ANALYZED IN CHAPTER 3 ARE EDUCATION, HIGHWAYS, POLICE PROTECTION, FIRE PROTECTION, WATER SUPPLY, SOLID WASTE DISPOSAL, SEWAGE, HEALTH AND HOSPITALS, AND PARKS AND RECREATION. CHAPTER 4 ANALYZES LOCAL NEEDS, EXPENDITURES, AND FISCAL CAPABILITIES. CHAPTER 5, PRESENTS THE STAGES OF DEVELOPMENT, AND THE BASIC PROBLEMS ASSOCIATED WITH DEVELOPMENT IN THIS ENVIRONMENT. THE TASK OF CHAPTER 6 IS TO ASSESS THE EFFECTIVENESS OF THE PLANNING AND MANAGEMENT CAPABILITY OF THE LOCAL GOVERNMENTS IN LOUISIANA'S COASTAL ZONE AND

	RECOMMEND POTENTIAL IMPROVEMENTS. CHAPTER 7 PROVIDES A DISCUSSION OF CITIZEN PARTICIPATION AT BOTH THE THEORETICAL LEVEL AND THE PRACTICAL LEVEL THROUGH AN EXAMINATION OF THE LOUISIANA COASTAL RESOURCES PROGRAM'S PUBLIC PARTICIPATION PROGRAM.
TITLE	OPPORTUNITIES TO RESOLVE SOME BASIC CONFLICTS OVER OUTER CONTINENTAL SHELF LEASING AND DEVELOPMENT.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CONTINENTAL SHELVES; ENERGY SOURCE DEVELOPMENT; PETROLEUM; CRUDE OIL; ENERGY POLICY; LEASING; EXPLORATION; PLANNING; RECOMMENDATIONS.
DESC NOTE	14P
ABSTRACT	THE OUTER CONTINENTAL SHELF (OCS) WILL PLAY AN IMPORTANT ROLE IN FUTURE ENERGY DEVELOPMENT BECAUSE SIGNIFICANT AMOUNTS OF HYDROCARBONS ARE THOUGHT TO BE CONTAINED THERE. CURRENTLY, TWO BILLS (S, 9 AND H.R. 1614) ARE PENDING BEFORE THE CONGRESS THAT WOULD INCLUDE REVISION OF THE OCS LEASING PROCESSES. THE LEGISLATIVE PROPOSALS SEEK TO INSURE THE PROTECTION AND ORDERLY DEVELOPMENT OF OUR COASTAL ZONES, PARTLY BY REQUIRING THAT THE PLANNING AND MANAGEMENT PROCESS FOR OCS LEASING AND DEVELOPMENT BE OPENED TO PUBLIC PARTICIPATION.
TITLE	OUR NATURAL RESOURCES - LET'S TALK CLEAN WATER, ANNUAL PUBLIC PARTICIPATION PROGRAM FOR WATER QUALITY MANAGEMENT PLANNING, 1976-77.
PUB DATE	76
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	WATER POLLUTION ABATEMENT; PARTICIPATIVE MANAGEMENT; PROJECT PLANNING; PUBLIC RELATIONS.
DESC NOTE	48P
ABSTRACT	THE REPORT PRESENTS AN ADOPTED ANNUAL PUBLIC PARTICIPATION PROGRAM FOR THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS IN AREAWIDE WATER QUALITY MANAGEMENT PLANNING PURSUANT TO REQUIREMENTS OF SECTION 208 OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972. IT HAS BEEN APPROVED BY THE AREAWIDE PLANNING ADVISORY COMMITTEE TO THE NCTCOG. THE DOCUMENT ADDRESSES THE FOLLOWING TOPICS: WHAT IS PUBLIC PARTICIPATION; WHAT ARE THE GOALS; WHO PARTICIPATES; HOW DOES THE PUBLIC PARTICIPATE; WHAT IS THE STAFFING AND FUNDING; AND HOW IS IT DOCUMENTED, EVALUATED AND CHANGED.

TITLE	PERCEPTIONS OF EFFECTIVE PUBLIC PARTICIPATION IN WATER RESOURCES DECISION-MAKING AND THEIR RELATIONSHIP TO LEVELS OF PARTICIPATION.
AUTHOR	POTTER, HARRY R.; NORVILLE, HEATHER J.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CITIZEN PARTICIPATION; ATTITUDE SURVEYS; WATER RESOURCES; INTERVIEWS; QUESTIONNAIRES; DECISION-MAKING; SOCIAL EFFECT; ECONOMIC FACTORS.
DESC NOTE	50P
ABSTRACT	THE REPORT FOCUSES ON HOW CITIZEN PARTICIPANTS PERCEIVE THE EFFECTIVENESS OF THEIR PARTICIPATION IN NATURAL RESOURCES DECISION-MAKING, COMPARING VERY, MODERATELY AND SLIGHTLY ACTIVE PARTICIPANTS, DATA ARE FROM PERSONAL INTERVIEWS WITH 77 VERY AND MODERATELY ACTIVE PERSONS, AND FROM MAILED QUESTIONNAIRES TO 106 MODERATELY AND SLIGHTLY ACTIVE PARTICIPANTS FROM THROUGHOUT INDIANA. THE OPERATIONAL MEASURE OF EXTENT OF PARTICIPATION USED FOR DATA ANALYSIS WAS HOURS PER WEEK SPENT ON ENVIRONMENTAL ACTIVITIES, WHICH HAD A FAIRLY STRONG RELATIONSHIP TO OTHER INDICATORS OF PARTICIPATION. PARTICIPANTS GENERALLY VIEWED THEIR PARTICIPATION AS EFFECTIVE ON A SERIES OF MEASURES. MOST EFFECTIVE TECHNIQUES INVOLVED DIRECT CONTACT WITH DECISION-MAKERS, THE PRESS AND OTHERS, AND KNOWLEDGE OF ISSUES. PUBLIC HEARINGS, ADVISORY BOARDS, COURTS AND LAWYERS, BUMPER STICKERS AND BUTTONS, AND PROTEST DEMONSTRATIONS WERE CONSIDERED MUCH LESS EFFECTIVE. VERY ACTIVE PARTICIPANTS TENDED TO HAVE MORE POSITIVE VIEWS OF AGENCIES, PARTICULARLY OF STATE AND FEDERAL AGENCIES.

TITLE	POLICIES AND PROCEDURES FOR PUBLIC INFORMATION, PUBLIC ACCESS TO AGENCY DOCUMENTS, AND PUBLIC PARTICIPATION IN METROPOLITAN HEALTH PLANNING CORPORATION (MHPC) ACTIVITIES.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	HEALTH SYSTEMS AGENCIES; ADMINISTRATION; COMMUNITY RELATIONS; CONSUMER PARTICIPATION; HEALTH PLANNING AGENCIES; HEALTH-RELATED ORGANIZATIONS; HEALTH RESOURCES; HEALTH SYSTEMS AGENCIES; LOCAL

	GOVERNMENT; OHIO; STATE REGIONS.
	10P
DESC NOTE	METROPOLITAN HEALTH PLANNING CORPORATION (MHPC),
ABSTRACT	THE HEALTH SYSTEMS AGENCY (HSA) SERVING 5 NORTHEAST OHIO COUNTIES, HAS PUBLISHED ITS POLICIES AND PROCEDURES IN RESPONSE TO THE HEALTH SYSTEMS AGENCIES ACT. THE BOOKLET CLEARLY OUTLINES MHPS'S POLICIES AND PROCEDURES FOR PUBLIC INFORMATION, PUBLIC ACCESS TO AGENCY DOCUMENTS AND PUBLIC PARTICIPATION IN AGENCY ACTIVITIES. IN PREPARING THIS DOCUMENT MHPC'S BOARD OF TRUSTEES ATTEMPTED TO INCLUDE ALL ACTIVITIES REQUIRED BY FEDERAL LAW, REGULATIONS AND PERFORMANCE STANDARDS IN A CONSISTENT AND COMPLETE MANNER. THOUGH THE PROCEDURES LISTED TO IMPLEMENT EACH POLICY ARE RESTRICTED TO ONLY THOSE REQUIRED BY FEDERAL GUIDELINES, MHPC CONSIDERS THEM ESSENTIALLY AS THE MINIMUM NECESSARY TO ACCOMPLISH EACH OBJECTIVE, AND IN PRACTICE DOES MORE THAN FULFILL THE BASIC REQUIREMENTS. FOR EXAMPLE, FEDERAL GUIDELINES REQUIRE HSA ISSUANCE OF ANNUAL AND PERIODIC REPORTS OF REVIEWS FOR PUBLIC INFORMATION COMPLIANCE. MHPC PUBLISHES A MONTHLY NEWSLETTER , CONDUCTS AN EXTENSIVE PRESS PROGRAM AND CARRIES OUT A NUMBER OF OTHER INFORMATIONAL PROJECTS. IN ADDITION, MHPC PLANS TO EVALUATE ITS POLICIES AND PROCEDURES ANNUALLY, AND AMEND THEM AS NECESSARY. THE DOCUMENT CAN PROVIDE AN EXAMPLE TO HEALTH PLANNERS IN OTHER AREAS OF HOW MHPC FUNCTIONS.
TITLE	POTENTIAL INSTITUTIONAL CONFLICTS IN THE IMPLEMENTATION OF THE RESOURCE CONSERVATION AND RECOVERY ACT AND THEIR IMPACTS ON THE DEPARTMENT OF ENERGY: BACKGROUND INFORMATION.
AUTHOR	CARNES, S.; TEVEPAUGH, C.; YOUNG, G.; DEVAULT, R. C.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	ELECTRIC UTILITIES; ENVIRONMENTAL POLICY; POLLUTION ABATEMENT; RESOURCE CONSERVATION; RESOURCE RECOVERY ACTS; COAL; COMMUNITIES; COMPLIANCE; ECONOMIC IMPACT ENVIRONMENTAL IMPACTS; FOSSIL FUEL POWER PLANTS; IMPLEMENTATION; INSTITUTIONAL FACTORS; LEGISLATION; LOCAL GOVERNMENT; US-EPA; WASTE DISPOSAL.
DESC NOTE	47P

ABSTRACT	THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) OF 1976 IS EXAMINED WITH RESPECT TO ITS IMPLEMENTATION BY EPA AND ITS IMPACTS ON DOE. GENERIC IMPLEMENTATION PROBLEMS ARE IDENTIFIED, AND IMPLEMENTATION OF THE ACT IS ASSESSED FROM THE PERSPECTIVES OF CONGRESS, THE EPA, THE COURTS, AND THE STATES. THE MAJOR FINDINGS OF THIS STUDY ARE: THE SHORT-TERM IMPLEMENTATION SCENARIO (1978-1983) IS LIKELY TO BE DOMINATED BY STATE AND LOCAL POLITICAL PROCESSES AND REGULATORY ACTIVITIES: RCRA IMPLEMENTATION IS LIKELY TO BE INTERPRETED AND GUIDED BY LITIGATION: THE RESOURCE AND ENERGY RECOVERY ASPECTS OF RCRA (SUBTITLE E) ARE BEING IGNORED RELATIVE TO THE HAZARDOUS WASTE ASPECTS OF RCRA (SUBTITLE C): EXPANDED PUBLIC PARTICIPATION UNDER RCRA IS DELAYING THE IMPLEMENTATION OF THE ACT AND MAY LEAD TO INCREASED LITIGATION: AND THE LONG-TERM IMPLEMENTATION SCENARIO (AFTER 1983) IS DIFFICULT TO PROJECT DUE TO PRESENT UNCERTAINTY AND NECESSARY REAUTHORIZATION BY CONGRESS IN 1979. 30 REFERENCES. (ERA CITATION 04: 044685).
TITLE	PROCEEDINGS FROM THE GULF STATES CONFERENCE ON COASTAL ZONE MANAGEMENT HELD AT BILOXI, MISSISSIPPI ON SEPTEMBER 18 AND 19, 1974.
PUB DATE	74
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	COASTAL ZONE MANAGEMENT; MEETINGS; BOUNDARIES; LAND USE; WATER RESOURCES; PROJECT PLANNING; REGIONAL PLANNING; MISSISSIPPI; TEXAS; LOUISIANA; ALABAMA; FLORIDA.
DESC NOTE	178P
ABSTRACT	THE OBJECTIVES OF THIS GULF STATES CONFERENCE ON COASTAL ZONE MANAGEMENT WERE TO: (1) PROVIDE A BASIS FOR THESE FIVE STATES TO EXCHANGE INFORMATION, ENGENDER COOPERATION AND COORDINATION AND IDENTIFY INTERSTATE PROBLEMS WHICH MIGHT REQUIRE ADDITIONAL EMPHASIS TO FACILITATE COHERENCY IN REGIONAL COASTAL ZONE; (2) DESIGNATING AND INVENTORYING AREAS OF PARTICULAR CONCERN IN COASTAL ZONE MANAGEMENT; (3) POLICIES AND REGIONAL COASTAL ZONE MANAGEMENT; (4) PERMISSIBLE LAND AND WATER USES AND PRIORITY OF USES IN THE COASTAL ZONE; (5) THE ORGANIZATIONAL STRUCTURE PROPOSED TO IMPLEMENT THE MANAGEMENT PROGRAM; AND (6) PUBLIC PARTICIPATION IN COASTAL ZONE MANAGEMENT.

TITLE	PROCESS DESIGN MANUAL: MUNICIPAL SLUDGE LANDFILLS.
AUTHOR	WALSH, JIM.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	SLUDGE DISPOSAL; SOLID WASTE DISPOSAL; SEWAGE DISPOSAL; SANITARY LANDFILLS; MANUALS.
DESC NOTE	331P
ABSTRACT	THIS MANUAL PROVIDES GENERAL GUIDANCE AND A SOURCE OF INFORMATION TO BE USED IN THE PLANNING, DESIGN, AND OPERATION OF A LANDFILL RECEIVING MUNICIPAL WASTEWATER TREATMENT PLANT SLUDGE. MAJOR ALTERNATIVE SLUDGE LANDFILLING METHODS ARE IDENTIFIED AND DESCRIBED. GUIDANCE IS GIVEN ON THE SELECTION OF THE LANDFILLING METHOD WHICH IS BEST SUITED FOR A GIVEN COMBINATION OF SLUDGE CHARACTERISTICS AND SITE CONDITIONS. FOR EACH LANDFILLING METHOD, THE FOLLOWING FEATURES ARE ADDRESSED: PUBLIC PARTICIPATION PROGRAM, SITE SELECTION, DESIGN, OPERATION, MONITORING, COMPLETED SITE, MANAGEMENT, AND COSTS.

TITLE	PUBLIC ATTITUDES TOWARD HIGHWAYS AND HIGHWAY TRANSPORTATION (A BIBLIOGRAPHY WITH ABSTRACTS).
AUTHOR	YOUNG, MARY E.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	BIBLIOGRAPHIES; HIGHWAYS; PUBLIC OPINION; ATTITUDE SURVEYS; QUESTIONNAIRES; DATA ACQUISITION; HIGHWAY PLANNING; CITIZEN PARTICIPATION; COMMUNITY; RELATIONS; CONSTRUCTION; ENVIRONMENTAL IMPACTS; REGIONAL PLANNING; URBAN AREAS; LIMITED-ACCESS HIGWAYS; SAFETY; ECONOMIC IMPACT; VEHICLES; INTERVIEWS; TRANSPORTATION NOISE.
DESC NOTE	191P
ABSTRACT	THE ATTITUDES AND OPINIONS OF THE GENERAL PUBLIC ARE INVESTIGATED WITH RESPECT TO EXISTING AND PROPOSED HIGHWAYS BY MEANS OF SURVEYS, QUESTIONNAIRES, AND INTERVIEWS. THE PERCEIVED EFFECTS OF HIGHWAY TRANSPORTATION ON COMMUNITIES, GROUPS, AND INDIVIDUALS ARE REPORTED, ALONG WITH EFFORTS TO STIMULATE PUBLIC PARTICIPATION IN HIGHWAY AND ROAD PLANNING, INCLUDING BRIDGES, BY PASSES, UNDERPASSES, AND OTHER CONSTRUCTIONS. REGIONAL, METROPOLITAN, AND SPECIFIC LOCAL AREA INTERESTS ARE CITED. ATTENTION IS GIVEN TO

SAFETY, ECONOMIC IMPACT, AND VARIOUS TYPES OF TRANSPORT AND CARRIERS. NOISE AND AIR POLLUTION OPINIONS ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 184 ABSTRACTS, 40 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

TITLE	PUBLIC ATTITUDES TOWARD HIGHWAYS AND HIGHWAY TRAFFIC (CITATIONS FROM THE NTIS DATA BASE).
AUTHOR	JONES, JACK E.
PUB DATE	80
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	BIBLIOGRAPHIES; HIGHWAYS; PUBLIC OPINION; ATTITUDE SURVEYS; QUESTIONNAIRES; DATA ACQUISTION; HIGHWAY PLANNING; CITIZEN PARTICIPATION; COMMUNITY RELATIONS; CONSTRUCTION; ENVIRONMENTAL IMPACTS; REGIONAL PLANNING; URBAN AREAS; LIMITED-ACCESS HIGHWAYS; SAFETY; ECONOMIC IMPACT; VEHICLES; INTERVIEWS; TRANSPORTATION NOISE.
DESC NOTE	141P
ABSTRACT	THE ATTITUDES AND OPINIONS OF THE GENERAL PUBLIC ARE INVESTIGATED WITH RESPECT TO EXISTING AND PROPOSED HIGWAYS BY MEANS OF SURVEYS, QUESTIONNAIRES, AND INTERVIEWS. THE PERCEIVED EFFECTS OF HIGHWAY TRANSPORTATION ON COMMUNITIES, GROUPS, AND INDIVIDUALS ARE REPORTED, ALONG WITH EFFORTS TO STIMULATE PUBLIC PARTICIPATION IN HIGHWAY AND ROAD PLANNING, INCLUDING BRIDGES, BY PASSES, UNDERPASSES, AND OTHER CONSTRUCTIONS. REGIONAL, METROPOLITAN, AND SPECIFIC LOCAL AREA INTERESTS ARE CITED. ATTENTION IS GIVEN TO SAFETY, ECONOMIC IMPACT, AND VARIOUS TYPES OF TRANSPORT AND CARRIERS. NOISE AND AIR POLLUTION OPINIONS ARE ALSO INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 134 ABSTRACTS, 14 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

TITLE	PUBLIC ATTITUDES TOWARD WATER ALLOCATION IN THE STATE OF WASHINGTON: CITIZENS, INTEREST GROUPS, AND AGENCIES.
AUTHOR	PIERCE, JOHN C.; DOERKSEN, HARVEY R.
PUB DATE	75
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	ATTITUDE SURVEYS; WATER QUALITY MANAGEMENT; WASHINGTON STATE; PUBLIC OPINION; QUESTIONNAIRES; RIVER BASIN DEVELOPMENT; ORGANIZATIONS; SOCIAL EFFECT; ALLOCATIONS; POLITICAL SCIENCE; IRRIGATION; PUBLIC UTILITIES; URBAN AREAS;

	DECISION-MAKING; CITIZEN PARTICIPATION.
DESC NOTE	170P
ABSTRACT	PUBLIC INVOLVEMENT IS CENTRAL TO WATER RESOURCE POLITICS. THE NEED FOR PUBLIC INVOLVEMENT AND ITS ULTIMATE SUCCESS DEPEND TO A LARGE EXTENT ON THE ATTITUDES AND BEHAVIOR OF ALL RELEVANT PARTICIPANTS. THE STUDY SEEKS TO EXAMINE A NUMBER OF CONCERNS RELATED TO PUBLIC INVOLVEMENT. THE BASIC METHODOLOGY EMPLOYED IS SURVEY RESEARCH, EXTENSIVE QUESTIONNAIRES WERE COMPLETED BY: (1) A SAMPLE OF THE GENERAL WASHINGTON STATE PUBLIC; (2) THE MEMBERS OF FIVE RIVER BASIN CITIZEN ADVISORY COMMITTEES; (3) SAMPLES OF THE PUBLIC IN THOSE FIVE RIVER BASINS; (4) LEADERS OF WATER INTERESTED ORGANIZATIONS IN WASHINGTON STATE; (5) MANAGERS OF IRRIGATION, PUBLIC UTILITY AND PORT DISTRICTS; AND (6) DIRECTORS OF PUBLIC WORKS IN CITIES OF 5,000 OR GREATER POPULATION. THE STUDY ANALYZES EACH SAMPLE SEPARATELY AND COMPARES ATTITUDES AND BEHAVIOR ACROSS GROUPS OF RESPONDENTS. MAJOR FOCI OF THE ANALYSIS INCLUDED ATTITUDES ABOUT PUBLIC INVOLVEMENT, ACTUAL PUBLIC PARTICIPATION, LEVELS OF REPRESENTATIONS, AND THE CHARACTERISTICS OF SPECIFIC LINKAGE MECHANISMS, SUCH AS CITIZEN ADVISORY COMMITTEES AND INTEREST GROUPS.
TITLE	PUBLIC CONSULTATION IN PUBLIC POLICY INFORMATION: A STATE-OF-THE-ART REPORT.
AUTHOR	BISHOP, A. B.; MCKEE, M.; HANSEN, R. D.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	GOVERNMENT POLICIES; PUBLIC OPINION; RADIOACTIVE WASTE DISPOSAL; RADIOACTIVE WASTE FACILITIES; BIBLIOGRAPHIES; DECISION-MAKING; PLANNING; PUBLIC RELATIONS; SITE SELECTION; SOCIAL IMPACT.
DESC NOTE	169P
ABSTRACT	THE PURPOSE OF THE NATIONAL WASTE TERMINAL STORAGE (NWTS) PROGRAM IS TO SITE, CONSTRUCT AND OPERATE NUCLEAR WASTE REPOSITORIES AT SEVERAL LOCATIONS. RECENT EXPERIENCE INDICATES THAT THE PUBLIC IS AWARE OF THE PROBLEMS OF NUCLEAR WASTE DISPOSAL, AND CORRESPONDINGLY THERE IS PUBLIC CONCERN ABOUT HOW AND WHERE TO DISPOSE OF NUCLEAR WASTES. THE SELECTION OF SITES INVOLVES A WIDE RANGE OF CONSIDERATIONS INCLUDING GEOLOGICAL, TECHNICAL AND ENVIRONMENTAL FEASIBILITY. IN ADDITION TO THESE, IT IS IMPORTANT THAT SOCIETAL ACCEPTANCE OF

REPOSITORY OPTIONS ALSO BE TAKEN INTO ACCOUNT IN MOVING FORWARD WITH THE NWTS PROGRAM. SUCH AN INCORPORATION OF SOCIAL CONSIDERATIONS AND PREFERENCES CORRESPONDINGLY IMPLIES THE NEED FOR PUBLIC CONSULTATION IN THE SITE SELECTION PROCESS. IN EXPLORING THE CONCEPT AND STATE-OF-THE-ART OF PUBLIC INVOLVEMENT IN PUBLIC POLICY DECISION, A NUMBER OF IMPORTANT QUESTIONS ARE RELEVANT: (1) WHAT ARE THE BASIC OBJECTIVES OF PUBLIC PARTICIPATION IN POLICY FORMATION AND PROGRAM DECISIONS; (2) WHO ARE THE "PUBLICS" THAT SHOULD BE INVOLVED AND HOW CAN THEY BE IDENTIFIED; (3) WHAT INFORMATION SHOULD BE COMMUNICATED BETWEEN THE AGENCY AND THE PUBLICS; AND (4) WHAT TECHNIQUES ARE AVAILABLE TO ELICIT PUBLIC PARTICIPATION AND INVOLVEMENT AND WHAT ARE THEIR CAPABILITIES. AT THE OUTSET, IT SHOULD BE NOTED THAT THE PURPOSE OF THIS PAPER IN ADDRESSING THESE QUESTIONS IS NOT TO DESIGN PUBLIC PARTICIPATION PROCEDURES FOR THE NWTS PROGRAM. RATHER, THE ABOVE ARE QUESTIONS THAT PROVIDE A BROAD FRAMEWORK FOR DEVELOPING AN UNDERSTANDING OF CITIZEN PARTICIPATION IN PUBLIC POLICY DECISIONS, SUCH AS NUCLEAR WASTE DISPOSAL. IN THIS SENSE, THE FOLLOWING DISCUSSION IS TO PROVIDE A CONTEXT AND GUIDANCE FOR APPROACHING THE PROBLEM OF ORGANIZING AND STRUCTURING INVOLVEMENT IN THE NWTS PROGRAM. ANNOTATED BIBLIOGRAPHY OF 95 REFERENCES IS INCLUDED. (ERA CITATION 03: 049704).

TITLE	PUBLIC PARTICIPATION HANDBOOK FOR WATER QUALITY MANAGEMENT.
AUTHOR	VOGT, SUSAN F.
PUB DATE	76
AVAIL	ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, D.C. 20460.
ABSTRACT	A BOOKLET DESCRIBING TECHNIQUES FOR PUBLIC INVOLVEMENT IN EPA'S WATER QUALITY MANAGEMENT ACTIVITIES.

TITLE	PUBLIC PARTICIPATION IN ENERGY RELATED DECISION MAKING: SIX CASE STUDIES.
AUTHOR	CLEMENTE, F.; COLE, J.; KLOMAN, E.; MCCABE, J.; SAWICKI, P.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC	ENERGY; CITIZEN PARTICIPATION; SITE SURVEYS; NUCLEAR ENERGY; ENERGY PARKS; PETROLEUM REFINERIES; LICENSES; REGULATIONS; PLANNING; DECISION-MAKING; PUBLIC OPINION; ENERGY POLICY; NEW HAMPSHIRE; MAINE; MICHIGAN; VIRGINIA; PENNSYLVANIA.
DESC NOTE	373P
ABSTRACT	EACH OF THE SIX CASE STUDIES DOCUMENTS PUBLIC PARTICIPATION IN FEDERAL AND/OR STATE GOVERNMENTAL DECISIONS RELATED TO ENERGY FACILITY SITING. FOUR OF THE CASES INVOLVED DECISIONS ON SPECIFIC FACILITIES AT SPECIFIC SITES, NAMELY: (1) VARIOUS STATE AND FEDERAL LICENSING PROCEDURES FOR THE SEABROOK, NEW HAMPSHIRE NUCLEAR FACILITY; (2) THE MAINE ENVIRONMENTAL IMPROVEMENT COMMISSION'S DENIAL OF A PERMIT FOR AN OIL REFINERY ON SEARS ISLAND ON PENOBSCOT BAY; (3) THE ATOMIC ENERGY COMMISSION'S AMENDMENT TO THE LICENSE FOR THE BIG ROCK POINT, MICHIGAN, NUCLEAR REACTOR TO ALLOW AN INCREASED LEVEL OF PLUTONIUM-ENRICHED FUEL USE; AND (4) THE AEC'S REVIEW, ARISING FROM DISCLOSURE OF A GEOLOGICAL FAULT, OF THE NORTH ANNA RIVER, VIRGINIA, NUCLEAR FACILITY. A FIFTH CASE DOCUMENTS A SERIES OF PUBLIC MEETINGS TO CONSIDER THE ENERGY PARK CONCEPT. THE SIXTH STUDY WAS A NARRATIVE HISTORY AND ANALYSIS OF RM-50-1, A RULEMAKING PROCEEDING CONDUCTED BY THE AEC IN 1972 AND 73 ON EMERGENCY CORE COOLING SYSTEM OPERATING STANDARDS.
TITLE	PUBLIC PARTICIPATION IN ENVIRONMENTAL DECISION-MAKING: SUBSTANCE OR ILLUSION.
AUTHOR	INGRAM, HELEN M.; ULLERY, SCOTT J.
PUB DATE	76
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	DECISION-MAKING; CITIZEN PARTICIPATION; PUBLIC OPINION; REGULATIONS; ENVIRONMENTAL IMPACTS; ENVIRONMENTAL IMPACT; STATEMENTS; EFFECTIVENESS.
DESC NOTE	41P
ABSTRACT	THE REPORT ASSESSES THE EXTENT TO WHICH PROCEDURAL RULES AND REGULATIONS, SUCH AS THOSE PREPARED UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (NEPA), ACTUALLY ALTER THE FLOW OF INFORMATION UPON WHICH DECISIONS ARE BASED. NEPA PROCEDURES ARE EXAMINED TO IDENTIFY THE OPPORTUNITIES FOR DEVELOPING NEW CHANNELS OF INFORMATION. FACTORS WHICH CAN BE EXPECTED TO STRUCTURE AND RESTRAIN THE FLOW OF INFORMATION ARE

IDENTIFIED. THE CHANGES WHICH HAVE ACTUALLY OCCURRED IN THE CHANNELS OF INFORMATION DURING THE YEARS OF NEPA'S IMPLEMENTATION ARE EVALUATED. ALTHOUGH THERE HAS BEEN AN ENVIRONMENTAL INFORMATION EXPLOSION SINCE NEPA'S IMPLEMENTATION AND THE CREATION OF A NEW INDUSTRY OF ENVIRONMENTAL ANALYSIS, THERE IS LITTLE EVIDENCE THAT THE GENERATION OF THIS DATA HAS SUBSTANTIVELY AFFECTED A LARGE NUMBER OF DECISIONS. THIS REPORT DEFINES THE IMPACT STATEMENT AS AN ADVOCACY DOCUMENT FOR GOVERNMENTAL AND PRIVATE INDUSTRIAL PROJECTS, AS A QUASI-LEGAL DOCUMENT, AS A FOCUS FOR POLITICAL ORGANIZING BUT NOT AS A SOURCE OF INFORMATION FOR DECISION-MAKING. THE PROCEDURAL PARTICIPATION OF A NEW ENVIRONMENTALLY ORIENTED PUBLIC HAS BECOME GREATER AS A RESULT OF NEPA, BUT ONLY WHEN NEW INFORMATION IS A BASIS FOR FINAL DECISIONS IS SUBSTANTIVE PARTICIPATION ACHIEVED.

TITLE	PUBLIC PARTICIPATION ON FEDERAL ENERGY ADVISORY COMMITTEES.
AUTHOR	SULLIVAN, JAMES B.
PUB DATE	76
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CITIZEN PARTICIPATION; GOVERNMENT POLICIES; DECISION-MAKING; NATIONAL GOVERNMENT; PUBLIC OPINION; PUBLIC RELATIONS; CONSTRAINTS; OBJECTIVES; RECOMMENDATIONS.
DESC NOTE	156P
ABSTRACT	THIS STUDY SEEKS TO DETERMINE HOW EFFECTIVE PUBLIC PARTICIPATION HAS BEEN ON FEDERAL ADVISORY COMMITTEES THAT DEAL WITH NATIONAL ENERGY POLICY. ATTAINMENT OF THE FEDERAL ADVISORY COMMITTEE ACT'S GOAL OF INCREASING PUBLIC PARTICIPATION IS SPOTTY. INDUSTRY REPRESENTATIVES CONSTITUTE NEARLY HALF (47.8%) OF ADVISORY COMMITTEES SURVEYED. BUSINESS (9.4%) AND ACADEMIC (7.0%) REPRESENTATIVES ARE THE SECOND LARGEST NON-GOVERNMENTAL GROUPS REPRESENTED. CONSUMER, ENVIRONMENTAL AND LABOR REPRESENTATIVES PROVIDE THE SMALLEST NUMBER OF MEMBERS WITH 4.3%, 3.0%, AND 1.9%, RESPECTIVELY. HOWEVER, BECAUSE OF THE FEDERAL ENERGY ADMINISTRATION ACT, THE FEDERAL ENERGY ADMINISTRATION'S COMMITTEES COMPARED TO OTHER AGENCIES INCLUDE MORE THAN DOUBLE THE NUMBER OF CONSUMER AND ENVIRONMENTAL REPRESENTATIVES—10.8% AND 7%, RESPECTIVELY.

TITLE	PUBLIC PARTICIPATION IN NUCLEAR WASTE MANAGEMENT.
AUTHOR	SCHILLING, A. H.; NEALEY, S. M.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	RADIOACTIVE WASTE MANAGEMENT; DECISION-MAKING; GOVERNMENT POLICIES; INFORMATION; PUBLIC OPINION.
DESC NOTE	25P
ABSTRACT	THE RECENT REPORT OF THE INTERAGENCY REVIEW GROUP (IRG) ON NUCLEAR WASTE MANAGEMENT FORMALIZED WHAT HAS BECOME INCREASINGLY CLEAR IN RECENT YEARS: PUBLIC PARTICIPATION IN NUCLEAR WASTE MANAGEMENT DECISIONS IS A FACT OF LIFE AND WILL BE MORE EMPHASIZED IN THE FUTURE THAN IN THE PAST. THE PURPOSE OF THIS PAPER IS TO DISCUSS, AND STIMULATE DISCUSSION, OF MAJOR ISSUES WHICH MUST BE CONSIDERED BEFORE ATTEMPTING TO DESIGN AND IMPLEMENT A PROGRAM TO ENCOURAGE PUBLIC PARTICIPATION IN THIS COMPLEX AND SENSITIVE AREA. PUBLIC PARTICIPATION IS A TERM WITH MANY POSSIBLE MEANINGS. THE TERM IS USED HERE TO STAND FOR A VERY WIDE RANGE OF ACTIVITIES INCLUDING: PROVIDING INFORMATION ABOUT PROGRAMS AND INTENDED ACTIONS, SEEKING ADVICE OR PERMISSION FROM STATE OR LOCAL OFFICIALS, CONDUCTING PUBLIC MEETINGS TO ANNOUNCE PLANS AND RECEIVE REACTIONS, CONDUCTING HEARINGS, ESTABLISHING CONSULTATIVE PANELS OF OUTSIDE EXPERTS OR SPECIAL INTEREST GROUP MEMBERS, AND EVEN CONDUCTING SURVEYS OF PUBLIC OPINION AND CONCERN. THIS PAPER IS NOT A PROPOSAL OR A SET OF SPECIFIC RECOMMENDATIONS, BUT A STIMULUS TO THOUGHT AND DISCUSSION. IT WAS PREPARED WITH DOE'S ROLE IN WASTE MANAGEMENT IN MIND, AND BENEFITS FROM THE AUTHOR'S OPPORTUNITY TO OBSERVE THE PUBLIC PARTICIPATION PROCESS IN THIS TOPIC AREA. THE PAPER IS ORGANIZED INTO FOUR SECTIONS THAT TAKE ACCOUNT OF (1) PAST PARTICIPATION EFFORTS, (2) WHY PUBLIC PARTICIPATION IS NECESSARY AND WHAT MIGHT BE GAINED BY IT, (3) CONSIDERATIONS IN DESIGNING A PARTICIPATION PROGRAM, AND (4) MAJOR PRINCIPLES INVOLVED IN CONDUCTING A PUBLIC PARTICIPATION PROGRAM, INCLUDING A BRIEF REVIEW OF PARTICIPATION PROCEDURES. (ERA CITATION 05: 021877).

TITLE	PUBLIC PARTICIPATION IN STATEWIDE 208 WATER QUALITY PLANNING IN NORTH CAROLINA: AN EVALUATION.
AUTHOR	GODSCHALK, DAVID R.; STIFTEL, BRUCE.
PUB DATE	80

AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	CITIZEN PARTICIPATION; WATER POLLUTION; NORTH CAROLINA; EVALUATION; DECISION-MAKING; SOCIOECONOMIC STATUS; RESEARCH PROJECTS; SURVEYS.
DESC NOTE	179P
ABSTRACT	THE PUBLIC PARTICIPATION EFFORT OF THE NORTH CAROLINA STATEWIDE WATER QUALITY PLANNING PROGRAM IS EVALUATED BASED UPON A MODEL OF PUBLIC PARTICIPATION IN PLANNING AS AN EXCHANGE PROCESS WITH THREE ARENAS: OPPORTUNITIES, INFORMATION, AND RESPONSE. DATA FOR THE EVALUATION WERE COLLECTED THROUGH FIELD OBSERVATION OF PARTICIPATION EVENTS, PERSONAL INTERVIEWS WITH AGENCY STAFF, AND A TWO-WAVE MAIL SURVEY OF PARTICIPANTS. THE PARTICIPATION PROGRAM ACTIVELY INVOLVED 1,600 PERSONS IN NINETY-FOUR MEETINGS OVER A TWO-AND-ONE-HALF YEAR PERIOD.

TITLE	PUBLIC PARTICIPATION IN THE NORTH CAROLINA STATEWIDE 208 WATER QUALITY PLANNING PROGRAM: AN EVALUATION OF THE PROBLEM IDENTIFICATION PHASE OF PLANNING.
AUTHOR	STIFTEL, BRUCE; HERZBERG, STEVEN; GODSCHALK, DAVID R.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	PROJECT PLANNING; WATER QUALITY MANAGEMENT; NORTH CAROLINA; CITIZEN PARTICIPATION; EVALUATION; COST ANALYSIS; RESPONSES; ACCEPTABILITY.
DESC NOTE	159P
ABSTRACT	THE PROBLEM IDENTIFICATION PHASE OF AN ANALYSIS OF THE PUBLIC PARTICIPATION EFFORT OF THE NORTH CAROLINA STATEWIDE '208' WATER QUALITY PLANNING PROGRAM IS PRESENTED. THE ANALYSIS WAS BASED ON 7 CRITERIA: ACCESSIBILITY, INVOLVEMENT, PUBLIC AWARENESS, STAFF AWARENESS, EFFECT ON STAFF AND PLAN, EFFECT ON PUBLIC AND PLAN, AND COST. THE MAJOR RESULTS INDICATE THAT THE PUBLIC PARTICIPATION PROGRAM WAS SUCCESSFUL FROM THE VIEWPOINT OF BOTH PLANNERS AND PARTICIPANTS.

TITLE	PUBLIC PARTICIPATION IN 208 WATER QUALITY PLANNING: A CASE STUDY OF TRIANGLE J COUNCIL OF GOVERNMENTS, NORTH CAROLINA.
AUTHOR	HERZBERG, STEVEN.

PUB DATE 78

AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC CITIZEN PARTICIPATION; WATER QUALITY MANAGEMENT; REGIONAL PLANNING; DECISION-MAKING; EVALUATION; STATE GOVERNMENT; LOCAL GOVERNMENT; EFFECTIVENESS.

DESC NOTE 72P

ABSTRACT THIS CASE STUDY WAS PREPARED AS PART OF A RESEARCH PROJECT ON PUBLIC PARTICIPATION IN AREA-WIDE WATER QUALITY PLANNING IN NORTH CAROLINA. ITS PURPOSE IS TO DOCUMENT THE EXPERIENCE OF PARTICIPANTS IN A COMPLETED REGIONAL WATER QUALITY PLANNING PROCESS, IN ORDER TO OFFER GUIDANCE TO THE STATE-WIDE PLANNING PROCESS CURRENTLY UNDERWAY. IN ADDITION TO THIS CASE STUDY, THE OVERALL RESEARCH WILL INCLUDE DESCRIPTION AND ANALYSIS OF THE VARIOUS PARTICIPATION ACTIVITIES UNDERTAKEN DURING PREPARATION OF THE STATE-WIDE PLAN, FROM STATE LEVEL ADVISORY GROUPS TO LOCAL INVOLVEMENT IN SMALL AREA PLANS. THE PURPOSE OF THE STUDY IS TO COMPARE THE EFFECTIVENESS OF DIFFERENT METHODS OF PUBLIC PARTICIPATION DURING THE STAGES OF THE PLANNING PROCESS.

TITLE PUBLIC WORKSHOPS ON THE PUGET SOUND AND ADJACENT WATERS STUDY: AN EVALUATION.

AUTHOR WIDDITSCH, ANN.

PUB DATE 72

AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

ABSTRACT CASE STUDY OF AN EARLY LOCAL PUBLIC PARTICIPATION APPROACH IN WATER RESOURCES. DESCRIBES EVENTS LEADING TO WORKSHOP DEVELOPMENT, A DESCRIPTION OF THEIR ORGANIZATION AND FUNCTIONING, AND AN EVALUATION (WITH RECOMMENDATIONS).

TITLE SELECTING EFFECTIVE CITIZEN PARTICIPATION TECHNIQUES.

AUTHOR TORREY, WAYNE R.; MILLS, FLORENCE W.

PUB DATE 77

AVAIL FEDERAL HIGHWAY ADMINISTRATION, U.S. DEPARTMENT OF TRANSPORTATION, WASHINGTON, D.C.

ABSTRACT THIS DOCUMENT SUMMARIZES SEVERAL EARLIER FHWA PUBLICATIONS ON CITIZEN PARTICIPATION TECHNIQUES.

TITLE SETTING THE COURSE FOR CLEAN WATER.

PUB DATE 77

AVAIL	NATIONAL WILDLIFE FEDERATION'S EDUCATION DIVISION, 1412 16TH STREET, N.W., WASHINGTON, D.C. 20036.
ABSTRACT	THIS HANDBOOK IS DESIGNED TO ENABLE CITIZENS TO PARTICIPATE EFFECTIVELY IN THE WATER QUALITY MANAGEMENT PROGRAM. IT CONTAINS INFORMATION ON EACH NONPOINT SOURCE POLLUTION PROBLEM.
TITLE	SOUTHEASTERN MICHIGAN WASTEWATER MANAGEMENT SURVEY SCOPE STUDY. PUBLIC PARTICIPATION APPENDIX.
PUB DATE	74
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	REGIONAL PLANNING; PUBLIC RELATIONS; COMMUNITY RELATIONS; MICHIGAN; PUBLIC OPINION; MEETINGS; SURVEYS; DECISION-MAKING.
DESC NOTE	221P
ABSTRACT	IN LINE WITH THE DIRECTIVES CONCERNING PUBLIC PARTICIPATION IN CORPS WATER RESOURCE PROJECTS AND ESPECIALLY IN REGARD TO THOSE APPLYING TO WASTEWATER MANAGEMENT STUDIES, THE PURPOSE OF THE DETROIT DISTRICT HAS BEEN TWOFOLD: (1) TO INFORM THE PUBLIC OF THE OBJECTIVES, THE PROCESS AND THE PROGRESS OF THE SOUTHEASTERN MICHIGAN WASTEWATER MANAGEMENT STUDY, AND (2) TO SEEK PUBLIC RESPONSE IN TERMS OF THE CONCERNS OF CITIZENS, THEIR REACTIONS AND SUGGESTIONS. AT THE OUTSET, THE DISTRICT STAFF WAS AT LEAST PARTIALLY ALERT TO THE FACT THAT PUBLIC AWARENESS OF THE PROBLEMS OF WASTEWATER MANAGEMENT WAS IMPERATIVE TO PUBLIC PARTICIPATION IN THE PROCESS OF RESOLVING THESE PROBLEMS. THERE WAS ALSO A FEELING THAT PUBLIC AWARENESS AND ATTITUDES INFLUENCE OR MAKE AN IMPACT ON DECISION-MAKERS, THAT IS, THOSE ELECTED OFFICIALS AND ADMINISTRATORS THAT ARE INVOLVED IN WASTEWATER MANAGEMENT. FINALLY, THERE WAS SOME RECOGNITION WITHIN THE DISTRICT STAFF THAT PUBLIC INVOLVEMENT IN THE PLANNING PROCESS STIMULATES AND FURTHERS A CONCERN FOR IMPLEMENTATION BY AUTHORITIES OF THE PLANS THAT RESULT. THOUGH THE EMPHASIS VARIED DURING THE THREE SERIES OF PUBLIC MEETINGS DURING 1972, AND THE FINAL SERIES OF MEETINGS IN DECEMBER 1973, THE GENERAL PURPOSE AS EXPRESSED ABOVE DOMINATED THESE MEETINGS. AT TIMES, THE INFORMATION CONTENT OF THE MEETINGS RANKED HIGH, AT OTHER TIMES PUBLIC REACTION AND COMMENT WAS THE MAJOR CHARACTERISTIC.

TITLE	A STUDY OF INTERESTED AND ACTIVE PARTIES CONCERNED WITH WATER RESOURCE MANAGEMENT IN WASHINGTON, STATE: IMPLICATIONS FOR A MANAGEMENT SYSTEMS MODEL.
AUTHOR	HAINES, BRUCE A.
PUB DATE	78
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	MANAGEMENT; WATER RESOURCES; WATER CONSERVATION; WASHINGTON STATE; DECISION-MAKING; SYSTEMS ANALYSIS; GOVERNMENT POLICIES; ATTITUDE SURVEYS; ORGANIZATIONS; STATE GOVERNMENT; LOCAL GOVERNMENT; NATIONAL GOVERNMENT; FLOW CHARTING; QUESTIONNAIRES; POPULATIONS; THESES; ALLOCATIONS.
DESC NOTE	136P
ABSTRACT	IN RESPONSE TO A LEGISLATIVE MANDATE CALLING FOR PUBLIC PARTICIPATION IN WATER RESOURCE MANAGEMENT IN WASHINGTON STATE, A HYPOTHETICAL MANAGEMENT MODEL WAS DEVELOPED. THE BACKGROUND OF CURRENT POLICY DECISIONS INCLUDES PAST AND PRESENT STATUTORY LAW, ADMINISTRATIVE REGULATIONS, AND LITERATURE ON THE CONCEPT OF BENEFICIAL USE OF WATER. MAJOR FACTORS CONSIDERED IN DEVELOPING THIS MODEL INCLUDED: THE PRESENT TAX PAYER REVOLT SEEKING A REDUCTION IN GOVERNMENT SPENDING: INCREASING PRESSURE FOR NEW USES/USERS OF THIS RESOURCE WHICH HAS FINITE, BUT UNPREDICTABLE LIMITS: AND PRESSURES FROM DIFFERENT USERS TO ESTABLISH THEIRS AS THE MOST IMPORTANT USE. A MANAGEMENT SYSTEM UTILIZING NON-GOVERNMENTAL ENTITIES TO DEVELOP AND ADMINISTER PROGRAMS DIRECTED TOWARD CONSERVATION, ESPECIALLY REDUCING WASTE, WOULD ADDRESS THESE PROBLEMS. THE MANAGEMENT SYSTEM IS DESCRIBED AND ACCOMPANIED BY A FLOW CHART OF ITS PHYSICAL STRUCTURE. TO DETERMINE THE POTENTIAL USEFULNESS OF THIS MODEL, DATA DERIVED FROM QUESTIONNAIRE RESPONSES OF GOVERNMENTAL AND NON-GOVERNMENTAL PEOPLE INTERESTED AND INVOLVED IN WATER RESOURCES ADMINISTRATION WERE USED. CONCLUSIONS RELATING TO THE VALIDITY OF THE MODEL AND FURTHER RESEARCH RECOMMENDATIONS ARE PRESENTED.

TITLE	SYNERGY CITIZEN PARTICIPATION/PUBLIC INVOLVEMENT SKILLS WORKBOOK.
AUTHOR	CREIGHTON, JAMES L.
PUB DATE	79

AVAIL	SYNERGY CONSULTATION SERVICE, LA MESA, CALIFORNIA.
ABSTRACT	THIS IS A WORKBOOK DISTRIBUTED TO PARTICIPANTS IN SYNERGY'S CITIZEN PARTICIPATION TRAINING PROGRAMS. SOME OF THE MATERIALS IN THE BOOK RELATE SPECIFICALLY TO THE TRAINING PROGRAM, BUT IT CONTAINS USEFUL READINGS ON PUBLIC INVOLVEMENT.

TITLE	TECHNOLOGY ASSESSMENT AND THE CITIZEN, PART I: SUMMARY OF CASE HISTORY APPROACHES TO EFFECTIVE PUBLIC PARTICIPATION.
AUTHOR	SULLIVAN, JAMES B.
PUB DATE	77
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
ABSTRACT	INCREASED OPPOSITION TO POLLUTION AND URBAN SPRAWL HAS RESULTED IN THE FORMATION OF CITIZEN GROUPS SEEKING TO CONTROL THEIR PERSONAL LIVES. ONE RESPONSE TO CITIZEN ACTIVITIES IS TECHNOLOGY ASSESSMENT IN WHICH CITIZENS CAN HAVE INPUT AT THE BEGINNING OF A TECHNOLOGICAL DEVELOPMENT BEFORE IT IS WELL ENTRENCHED. IN TWO CASE STUDIES OF PUBLIC PARTICIPATION IN ASSESSING ENERGY TECHNOLOGIES, THE FIRST TREATS CITIZEN GROUP INVOLVEMENT IN ELECTRIC UTILITY POLICY MAKING. THE SECOND DISCUSSES CITIZEN PARTICIPATION ON FEDERAL ADVISORY COMMITTEES. BOTH ARE EXAMPLES OF NEW PROCEDURES TO PROVIDE MORE PUBLIC PARTICIPATION IN GOVERNMENT DECISION-MAKING AND ALSO PROVIDE STRONG EVIDENCE OF THE GREAT DIFFICULTIES CITIZENS HAVE IN INFLUENCING TECHNOLOGY POLICY MAKING. SOME OF THE PROBLEMS INVOLVED ARE LISTED. A SUMMARY OF EXAMPLES FROM THESE TWO CASES ARE GROUPED IN APPROACH AREAS: (1) FORMALIZE COMMITMENTS TO PUBLIC PARTICIPATION BY REMOVING VAGUENESS IN PUBLIC PARTICIPATION STATUTES AND REGULATIONS; (2) PROVIDE ACCOUNTABILITY TO CITIZENS; (4) ACTIVELY SOLICIT DIVERSE CITIZEN INPUT; AND (5) PROVIDE TECHNICAL AND FINANCIAL RESOURCES FOR CITIZEN GROUPS. THE REMAINDER OF THIS REPORT PROVIDES A DETAILED DESCRIPTION OF EACH APPROACH.

TITLE	TECHNOLOGY ASSESSMENT OF CHANGES IN THE FUTURE USE AND CHARACTERISTICS OF THE AUTOMOBILE TRANSPORTATION SYSTEM, VOLUME III, PUBLIC PARTICIPATION.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.

DESC	HIGHWAY TRANSPORTATION; AUTOMOBILES; TECHNOLOGY ASSESSMENT; PUBLIC OPINION; ATTITUDES; PASSENGER TRANSPORTATION; SAFETY BELTS; CITIZEN PARTICIPATION.
DESC NOTE	78P
ABSTRACT	THE REPORT PRESENTS THE FINDINGS OF A NATIONWIDE PUBLIC PARTICIPATION EFFORT CONDUCTED IN 1978 IN CONJUNCTION WITH THE ASSESSMENT OF THE FUTURE USE AND CHARACTERISTICS OF THE AUTOMOBILE TRANSPORTATION SYSTEM. THE INTENT OF THE PUBLIC PARTICIPATION PROGRAM WAS TWOFOLD: (1) TO SOLICIT COMMENTARY ON THE ISSUES, ALTERNATIVES FOR PERSONAL TRANSPORTATION, AND FEDERAL GOVERNMENT POLICY OPTIONS; AND (2) TO FACILITATE THE PUBLIC'S PARTICIPATION IN OTA'S TECHNOLOGY ASSESSMENT PROCESS. ESSENTIALLY, THIS REPORT IS A SYNOPSIS OF WHAT PEOPLE SAID. IT IS ILLUSTRATIVE OF ATTITUDES AND VIEWPOINTS OF A WIDE VARIETY OF AMERICANS. THE DISCUSSION IS DELIBERATELY INFORMAL, AND VERBATIM QUOTES ARE USED FREQUENTLY SO AS TO CAPTURE BOTH THE SUBSTANCE AND THE TONE OF THE RESPONDENTS REMARKS AS ACCURATELY AS POSSIBLE.
TITLE	URBANIZATION AND WATER QUALITY PLANNING: THE 208 EXPERIENCE IN MASSACHUSETTS.
AUTHOR	SCHWARZ, HARRY E.; JOHNSON, BRANDON B.; CAIAZZO, ROBERT J.; PINCUS, DEBRA E.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	WATER RESOURCES; URBAN PLANNING; MASSACHUSETTS; CITIZEN PARTICIPATION; POPULATIONS; SEWERS; RUNOFF; SEWAGE TREATMENT; URBANIZATION; ASSESSMENT; MANAGEMENT.
DESC NOTE	146P
ABSTRACT	THE INITIAL PREMISE OF THIS STUDY WAS THAT THE DEGREE OF URBANIZATION IN AN AREA WOULD AFFECT THE SCOPE OF THE PLANNING PROCESS, PUBLIC PARICIPATION IN PLANNING, AND THE PLAN ITSELF. THREE MEASURES OF URBANIZATION WERE USED IN THIS STUDY; THE PERCENTAGE OF THE REGION IN URBAN LAND USE; THE PROPORTION OF THE POPULATION SERVED BY SEWERS; AND THE POPULATION DENSITY. EACH OF THESE WAS AN INDEPENDENT VARIABLE IN ASSESSING THE INTER-REGIONAL VARIATION OF ATTRIBUTES OF THE 208 PLANS AND OF THE 208 PLANNING PROCESS. IT WAS FOUND THAT THE DEGREE OF URBANIZATION DOES NOT APPEAR TO HAVE BEEN A SIGNIFICANT FACTOR IN THE

208 PLANNING PROCESS.

TITLE	VIDEOCONFERENCING VIA SATELLITE: OPENING CONGRESS TO THE PEOPLE.
AUTHOR	WOOD, FRED B.
PUB DATE	79
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	COMMUNICATION SATELLITES; LEGISLATORS; TELECOMMUNICATION; DELIVERY SYSTEMS; FEDERAL GOVERNMENT; INTERACTION; POLITICAL ISSUES; PROGRAM EVALUATION.
DESC NOTE	61P
ABSTRACT	THIS EVALUATIVE STUDY INVESTIGATED THROUGH ACTUAL DEMONSTRATIONS THE EFFECTIVENESS OF SATELLITE VIDEOCONFERENCING IN PROVIDING A NEW MECHANISM FOR INFORMED DIALOGUE BETWEEN CONGRESSMEN AND CONSTITUENTS, THUS STRENGTHENING THE LEGISLATIVE PROCESS. IN THIS EXPERIMENT, THE USE OF NASA'S PORTABLE EARTH TERMINAL WAS INSTRUMENTAL IN MAKING SATELLITE COMMUNICATIONS ACCESSIBLE TO SEVERAL PUBLIC CONSTITUENCIES. QUESTIONS ANSWERED BY THAT STUDY INCLUDED THOSE OF UTILITY, COST, AND AVAILABILITY OF VIDEOCONFERENCES. RESPONSES BY STUDY PARTICIPANTS SUGGEST THAT SATELLITE VIDEOCONFERENCING SHOULD BE USED BY THE CONGRESS TO FACILITATE BROAD PUBLIC PARTICIPATION IN KEY ASPECTS OF THE LEGISLATIVE PROCESS.

TITLE	WASHINGTON METROPOLITAN AREA WATER SUPPLY STUDY. ANNEX A, OPEN PLANNING AND COORDINATION, VOLUME 2.
PUB DATE	75
AVAIL	NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC	WATER SUPPLIES; POTOMAC RIVER; MANAGEMENT PLANNING AND CONTROL; WATER RESOURCES; PUBLIC OPINION; DISTRICT OF COLUMBIA; WATER CONSERVATION; WATER-FLOW; LOW COSTS; ECONOMIC ANALYSIS; IMPACT; REQUIREMENTS; CONSUMPTION; DEFICIENCIES; RESERVOIRS; POPULATION; RISK; ESTUARIES; QUESTIONNAIRES; UNITED STATES GOVERNMENT; STATE GOVERNMENT; VIRGINIA; MARYLAND; FEASIBILITY STUDIES.
DESC NOTE	157P
ABSTRACT	THIS ANNEX CONTAINS A DESCRIPTION OF THE PUBLIC PARTICIPATION PROCESS WHICH TOOK PLACE DURING THE WASHINGTON METROPOLITAN AREA WATER SUPPLY STUDY, AND THOSE WHO WERE INVOLVED IN THAT PROCESS. IT PRESENTS DESIRES AND ISSUES OF THE VARIOUS

FEDERAL, STATE, AND LOCAL AGENCIES, AS WELL AS THOSE OF THE INDIVIDUAL CITIZENS. THESE OPINIONS WERE RECEIVED ON QUESTIONNAIRES, AND THROUGH LETTERS AND TELEPHONE CALLS. A COPY OF THE APRIL 1974 NORTH ATLANTIC DIVISION STAFF INTERIM REPORT IS PROVIDED AS AN APPENDIX. IT RESPONDS DIRECTLY TO A SERIES OF QUESTIONS, CONCLUDING THAT THE WASHINGTON METROPOLITAN AREA (WMA) COULD WAIT UNTIL 1990 FOR NEW PROGRAMS TO BECOME OPERTIONAL IF THE AREA POPULATION WERE WILLING TO ACCEPT THE RISK OF A LESS THAN 30-DAY DROUGHT. THE INTERIM REPORT ALSO INDICATES THAT PROJECTS OTHER THAN UPSTREAM RESERVOIRS SHOULD BE INVESTIGATED. (AUTHOR).

TITLE WASTEWATER MANAGEMENT STUDY FOR CHICAGO SOUTH END OF LAKE MICHIGAN. APPENDIX H. PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM.
PUB DATE 73
AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC WATER TREATMENT; WASTEWATER; MANAGEMENT PLANNING AND CONTROL; PUBLIC RELATIONS; WATER QUALITY; SEWAGE TREATMENT; SOCIAL COMMUNICATION; FEEDBACK; AGRICULTURE; GREAT LAKES; ILLINOIS; INDIANA.
DESC NOTE THE PURPOSE OF THIS APPENDIX IS TO DESCRIBE THE INVOLVEMENT AND EXTENT OF PUBLIC PARTICIPATION IN THE PLAN FORMULATION PROCESS FOR THE CHICAGO SOUTH END OF LAKE MICHIGAN WASTEWATER MANAGEMENT STUDY. THE GENERAL PROCEDURES USED TO ENSURE THE PUBLIC'S INVOLVEMENT ARE EXPLAINED, AS ARE THE NATURE AND EXTENT OF THE GENERAL PUBLIC MEETINGS, THE INTERACTION WITH CITIZEN ADVISORY GROUPS, INTERAGENCY COORDINATION, AND THE RELATIONSHIPS WITH THE COMMUNICATION MEDIA: ALL AN INTEGRAL PART OF THE PUBLIC INVOLVEMENT PROGRAM. VARIOUS METHODS OF COMMUNICATION BY WHICH INFORMATION WAS DISSEMINATED TO THE PUBLIC AND FEEDBACK SOLICITED ARE ALSO PRESENTED.

TITLE THE WINOOSKI WORKSHOPS: AN ASSESSMENT OF SPECIFIED WORKSHOP TECHNIQUES FOR STIMULATING AND IMPROVING PUBLIC INVOLVEMENT IN WATER RESOURCES.
AUTHOR WILM, ANN S.; THOMAS, KRISTI L.
PUB DATE 75
AVAIL NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161.
DESC CITIZEN PARTICIPATION; WATER RESOURCES; SOCIAL COMMUNICATION; RIVER BASIN DEVELOPMENT; WATER

QUALITY; WINOOSKI RIVER; DECISION-MAKING; ECONOMIC DEVELOPMENT; ATTITUDE SURVEYS; SOCIAL PSYCHOLOGY; QUESTIONNAIRES; ENVIRONMENTS; VERMONT.

DESC NOTE 99P

ABSTRACT PUBLIC PARTICIPATION IS A DYNAMIC COMMUNICATION PROCESS WITHIN A SOCIAL SYSTEM, A SOURCE OF INFORMATION AND SUPPORT FOR SOCIAL AND ECONOMIC GOALS. CURRENT INTEREST IN CITIZEN PARTICIPATION IS SPARKED BY CHANGES IN SOCIAL VALUES AND MORE SPECIFICALLY BY A CHANGE IN THE PUBLIC'S PERCEPTION OF GOVERNMENT RESPONSIBILITY. VERMONT IS DRAWING UP ITS RIVER BASIN WATER QUALITY PLANS FOR THE MAJOR RIVERS OF THE STATE. AGENCIES HAVE CALLED FOR CITIZEN INPUT. THIS PROVIDED AN OPPORTUNITY TO TEST A COMMONLY USED WORKSHOP TECHNIQUE FOR INVOLVING CITIZENS AGAINST A SECOND FORMAT WHICH INVOLVED A MORE SOCIAL PSYCHOLOGICAL ORIENTATION AND SMALL GROUP PROBLEM-SOLVING TECHNIQUES. THE PURPOSE OF THIS PROJECT WAS TO TEST THE HYPOTHESIS THAT DIFFERENCES IN ENVIRONMENTAL SETTINGS REFLECT, AND ARE REFLECTED IN CITIZEN MOTIVATION LEVELS TO BECOME INVOLVED IN WATER RESOURCE DECISION-MAKING.

TITLE	ANALYSIS OF NEW TECHNIQUES FOR PUBLIC INVOLVEMENT IN WATER PLANNING.
AUTHOR	WAGNER, T. P., AND L. ORTOLANO
AVAIL	WATER RESOURCES BULLETIN, VOL 11 NO 2, APRIL, 1975.

TITLE	AN APPROACH FOR INVOLVING LOCAL OFFICIALS AND CITIZENS IN REGIONAL WATER QUALITY STUDIES.
AUTHOR	CALIFF, JR., J. M.
AVAIL	REPORT EEP-44, STANFORD UNIVERSITY, STANFORD, CALIFORNIA, JULY 1971.

TITLE	ATTITUDES, CHARACTERISTICS, AND EDUCATION OF WATER RESOURCES PLANNERS AND MANAGERS RELATIVE TO EFFECTIVE PUBLIC PARTICIPATION.
AUTHOR	DYSART, BENJAMIN C., FLETCHER, JOANNE J., SUTTERFIELD, STEPHEN T., AND LANGSLON, CHARLES H.
AVAIL	WATER RESOURCES RESEARCH INSTITUTE, CLEMSON UNIVERSITY, 1977.

TITLE	BIBLIOGRAPHY ON CITIZEN PARTICIPATION
AUTHOR	YIN, ROBERT K., ET AL.
CORP AUTH	RAND CORPORATION, SANTA MONICA, CALIFORNIA
AVAIL	U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, WASHINGTON, DC.

TITLE	A BLUEPRINT FOR A TELEVISION ENVIRONMENTAL SIMULATION PROJECT: THE LAND AND ME.
AUTHOR	PAPPS, GRACE, ET AL.
AVAIL	U.S. EPA, OFFICE OF EDUCATION (DHEW), 1974.

TITLE	BUSINESS CORPORATION AND ENVIRONMENTAL PROTECTION.
AUTHOR	RIENOW, ROBERT.
AVAIL	NATIONAL FORUM, THE PHI KAPPA PHI JOURNAL, VOL 58, NO 3, 1978.

TITLE	CAN CITIZENS INVENT THEIR FUTURE?
AUTHOR	HAVLICK, SPENSER W.
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AUTHOR	MAZMANIAN, DANIEL A. AND NIENABER, JEANNE.
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AUTH	SELLEVOLD, R. P.
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AUTHOR	MANNHEIM, M. L., ET AL.
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AUTHOR	U.S. CITIZEN'S ADVISORY COMMITTEE ON ENVIRONMENTAL QUALITY.
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AUTHOR	DELLI PRISCOLI, JERRY.
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AUTHOR	SINGER, GRACE L.
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AUTHOR	EBBIN, STEVEN AND KASPER, RAPHAEL.
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AUTHOR	DOERKSEN, HARVEY R. AND PIERCE, JOHN C.
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AUTHOR	JACKSON, JOHN S., III, AND SHADE, WILLIAM L.
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AUTHOR	ROSENER, JUDY B.
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AUTHOR	VAN METER, ELENA C.
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AUTHOR	CALDWELL, LYNTON K.; HAYES, LYNTON R.; AND MACWHIRTER, ISABEL.
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CORP AUTH	OFFICE OF WATER RESOURCES RESEARCH.
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IRIS can be scanned for a particular subject or author, both by hand and by computer. Any institution with appropriate computer terminals can access the search and retrieval capabilities of the system.

Audiovisual Library

The IRC facilities include an audiovisual library equipped with individual study carrels for viewing movies, videocassettes, slide/tape presentations, filmstrips, and tape programs. Before determining curriculum requirements or making purchases, educators can use the library to review water quality-oriented materials for use in training courses.

Nearly 200 of these audiovisuals are also available to instructors for rental. Not intended as self-instructional units, these materials are meant to be used as part of a complete training program. A catalog of audiovisual units can be obtained through the IRC.

Workshops

The center also conducts a variety of water-related workshops each year. Designed for state and local agencies, as well as college and university educators, these seminars enable individuals to become familiar with USEPA-developed and sponsored resources, descriptions of ongoing programs, and specific instructional techniques.

IRC Bulletin

The IRC maintains communications with its users through the IRC Bulletin. Published six times a year and mailed to interested parties at a small charge, the Bulletin provides current news on IRC events. It also includes descriptions of model programs, current instructional materials available, and education strategies. Articles for the Bulletin are accepted from various organizations, education institutions, and governmental agencies.

THE INSTRUCTIONAL RESOURCES INFORMATION SYSTEM

General Information about Materials in IRIS

The EPA Instructional Resources Center acquires, reviews, indexes, and makes available both print and non-print materials related to water quality and water resources education and instruction.

Before materials are entered into IRIS they are reviewed by the project staff. Availability of the material is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material.

When items are processed they are entered on the IRIS computer tape maintained by the EPA Instructional Resources Center at The Ohio State University. These tapes are used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

Materials entered into the IRIS collection can be located by manual search or by computer. The first compilation contains resumes of selected materials processed for the previous IRIS collection and resumes of selected materials of items added to the IRIS collection during 1979. Quarterly updates of the IRIS compilation are available by subscription on a yearly basis.

A number of the materials processed for the IRIS system are entered into the ERIC system and announced in Resources in Education (RIE). Most of the materials announced in RIE are available on microfiche at various sites throughout the United States. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost.

Description of Information in Resumes in IRIS

Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is of an item not entered in ERIC. Sample resume #2 is of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

1. Sample resume of materials not entered into ERIC

   a. IRIS NUMBER: EW003059
   b. PUBLICATION DATE: 1978
   c. TITLE: WATER POLLUTION MICROBIOLOGY, VOL. 2
   d. PERSONAL AUTHOR: MITCHELL, RALPH
   e. DESCRIPTOR: BIOCHEMISTRY; *COLLEGE SCIENCE; DISEASE CONTROL; ECOLOGY; *ENVIRONMENTAL INFLUENCES; *INSTRUCTIONAL MATERIALS; *MICROBIOLOGY; NATURAL RESOURCES; *POLLUTION; *PUBLIC HEALTH; *WATER POLLUTION CONTROL; WATER QUALITY
   f. DESCRIPTIVE NOTE: 442P.
   g. ABSTRACT: THIS VOLUME CONTAINS INFORMATION FOR ENVIRONMENTAL AND SANITARY ENGINEERS, PUBLIC HEALTH SCIENTISTS AND MICROBIOLOGISTS CONCERNED WITH WATER POLLUTION. IT EXAMINES MICROORGANISMS AS CAUSITIVE AGENTS OF ECOLOGICAL AND PUBLIC HEALTH HAZARDS IN NATURAL WATERS, AND TREATS THE USE OF MICROORGANISMS IN POLLUTION CONTROL FROM A VARIETY OF PERSPECTIVES. (CS)
   h. AVAILABILITY: JOHN WILEY & SONS, ONE WILEY DR., SOMERSET NJ 08873 ($24.95)

   a. IRIS NUMBER—this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.

   b. PUBLICATION DATE—date material was published according to information on the material.

   c. TITLE

   d. PERSONAL AUTHOR—person or persons who wrote, compiled, or edited the material. Up to two personal authors can be listed.

   e. DESCRIPTOR—subject terms which characterize substantive contents and form of the materials. The major terms are preceded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.

   f. DESCRIPTIVE NOTE—various items of information may be contained in this section. For print materials the number of pages is usually listed.

g. ABSTRACT--some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.

h. AVAILABILITY--information in this field indicates where the material can be obtained and the price of the material quoted the last time information was received from the source. Please note: prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

2. Sample resume of material entered into ERIC (Resources in Education)

Item entered into ERIC (Resources in Education) will have a few additional data fields.

IRIS NUMBER: EW002998

a. ERIC NUMBER: ED151236
PUBLICATION DATE: SEP 77
TITLE: CHLORINATION. TRAINING MODULE 2.300.2.77.
INSTITUTION CODE: BBB08399
SPONSORING AGENCY CODE: BBB15379; FGK21436
DESCRIPTOR: *CHEMISTRY; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; SECONDARY EDUCATION; *TEACHING GUIDES; *UNITS OF STUDY; WATER POLLUTION CONTROL; *CHLORINATION; *WASTE WATER TREATMENT; WATER TREATMENT

b. EDRS PRICE: EDRS PRICE MF-$0.83 HC-$3.50 PLUS POSTAGE
DESCRIPTIVE NOTE: 60P. FOR RELATED DOCUMENTS, SEE SE024 025-046

c. ISSUE: RIEJUL78
ABSTRACT: THIS DOCUMENT IS AN INSTRUCTIONAL MODULE PACKAGE PREPARED IN OBJECTIVE FORM FOR USE BY AN INSTRUCTOR FAMILIAR WITH CHLORINE. THE REASONS FOR CHLORINATION AND SAFE OPERATION AND MAINTENANCE OF GAS CHLORINE, DRY CALCIUM, HYPOCHLORITE AND LIQUID SODIUM HYPOCHLORITE CHLORINATION SYSTEMS FOR WATER SUPPLY AND WASTEWATER TREATMENT FACILITIES ARE GIVEN. INCLUDED ARE OBJECTIVES, INSTRUCTOR GUIDES, STUDENT HANDOUTS AND TRANSPARENCY MASTERS. THE MODULE CONSIDERS PURPOSES OF CHLORINATION, PROPERTIES OF CHLORINE, METHODS OF CHLORINATION, SAFETY, MAINTENANCE OF CHLORINATION UNITS AND INTERPRETATION OF TEST RESULTS. (AUTHOR/RH)

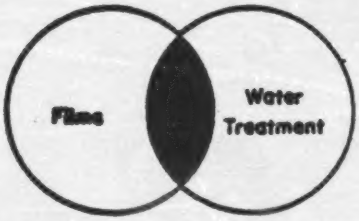
d. INSTITUTION NAME: KIRKWOOD COMMUNITY COLL., CEDAR RAPIDS, IOWA.
SPONSORING AGENCY NAME: DEPARTMENT OF LABOR, WASHINGTON, D.C.; IOWA STATE DEPT. OF ENVIRONMENTAL QUALITY, DES MOINES.

How to Locate Desired Materials in IRIS

Users can identify materials of interest by scanning the resume listing, or using the Subject Index, Author Index, or Institution Index in the IRIS Compilation.

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to laboratory techniques and to wastewater treatment. Similar techniques could be used to identify other information desired.



If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author. These documents are listed under the name of the institution or organization responsible for developing the document in the Institution Index. Both sources can be used to help you locate documents.

The ERIC System

Another excellent source of educational information and materials is the ERIC system. ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research, instructional materials, teaching guides, and other related information that can be used to develop effective educational programs.

ERIC Clearinghouses

There are 16 clearinghouses in the nationwide ERIC network. Each clearinghouse has responsibility for collecting and analyzing materials related to their scope.

ADULT, CAREER, AND VOCATIONAL EDUCATION
The Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
(614) 486-3655

COUNSELING AND PERSONNEL SERVICES
University of Michigan
School of Education, Room 2108
Ann Arbor, Michigan 48109
(313) 764-9492

EDUCATIONAL MANAGEMENT
University of Oregon
Library, Room 108
Eugene, Oregon 97403
(503) 686-5043

ELEMENTARY AND EARLY CHILDHOOD EDUCATION
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801
(217) 333-1386

HANDICAPPED AND GIFTED CHILDREN
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
(703) 620-3660

HIGHER EDUCATION
George Washington University
One Dupont Circle N.W., Suite 630
Washington, DC 20036
(202) 296-2597

INFORMATION RESOURCES
Syracuse University
School of Education
Huntington Hall
150 Marshall Street
Syracuse, New York 13210
(315) 423-3640

JUNIOR COLLEGES
University of California at Los Angeles (UCLA)
Mathematical Sciences Building
Room 8118
405 Hilgard Avenue
Los Angeles, California 90024
(213) 825-3931

LANGUAGES AND LINGUISTICS
Center for Applied Linguistics
3520 Prospect Street, N.W.
Washington, DC 20007
(202) 298-9292

READING AND COMMUNICATION SKILLS
National Council of Teachers of English
1111 Kenyon Road
Urbana, Illinois 61801
(217) 328-3870

RURAL EDUCATION AND SMALL SCHOOLS
New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
(505) 646-2623

SCIENCE, MATHEMATICS, AND ENVIRONMENTAL EDUCATION
The Ohio State University
1200 Chambers Road, Third Floor
Columbus, Ohio 43212
(614) 422-6717

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SOCIAL STUDIES/SOCIAL SCIENCE EDUCATION
Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302
(303) 492-8434

TEACHER EDUCATION
American Association of Colleges for Teacher Education
One Dupont Circle, NW, Suite 610
Washington, DC 20036
(202) 293-2450

TESTS, MEASUREMENT, AND EVALUATION
Educational Testing Service (ETS)
Rosedale Road
Princeton, New Jersey 08541
(609) 734-5176

URBAN EDUCATION
Teachers College, Columbia University
Institute for Urban and Minority Education
Box 40
525 West 120th Street
New York, New York 10027
(212) 678-3433